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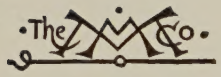
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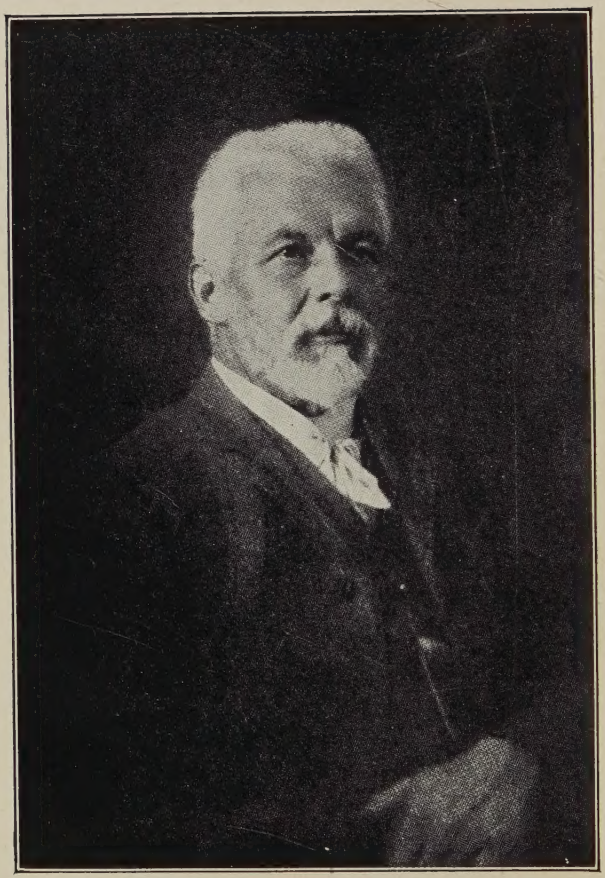
A HANDBOOK
OF
VOCATIONAL EDUCATION



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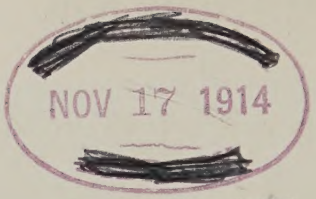
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1914

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THE old general rule was that educated people did not perform manual labor. They managed to eat their bread, leaving the toil of producing it to the uneducated. This was not an insupportable evil to the working bees, so long as the class of drones remained very small. But now, especially in these free States, nearly all are educated — quite too nearly all to have the labor of the uneducated in any wise adequate to the support of the whole. It follows from this that henceforth educated people must labor. Otherwise education itself would become a positive and intolerable evil. No country can sustain in idleness more than a small percentage of its numbers. The great majority must labor at something productive. From these premises the problem springs, "How can labor and education be the most satisfactorily combined?"

Free labor argues that as the Author of man makes every individual with one head and one pair of hands, it was probably intended that heads and hands should coöperate as friends, and that that particular head should direct and control that pair of hands. As each man has one mouth to be fed, and one pair of hands to furnish food, it was probably intended that that particular pair of hands should feed that particular mouth — that each head is the natural guardian, director, and protector of the hands and mouth inseparably connected with it; and that being so, every head should be cultivated and improved by whatever will add to its capacity for performing its charge. In one word, free labor insists on universal education. — ABRAHAM LINCOLN.

PREFACE

It has taken the United States a long time to see the need of vocational education. The industrial revolution has been so gradual and the stream of immigration has so largely supplied our demand for skilled labor that we have drifted into a perilous situation without any sense of the danger ahead. Now that we realize our position, something like a panic has seized the American people. The cry of the Nation is, "What must I do to be saved?" Some are for lightening the ship by casting out the wheat into the sea. Others propose to abandon the old craft and trust their lives to the life-boats. Educators who have been studying retardation and elimination have come to the conclusion that the "enrichment" of the course of study has gone so far that now the children are suffering from mental indigestion. They are those who would cast the

wheat into the sea. They would reduce the subject matter by taking out algebra, foreign languages and histories, and the study of literary masterpieces, leaving the curriculum as it was thirty years ago. Others, especially laymen who see that our schools are not preparing children to earn a livelihood, want us to discard the traditional curriculum of culture and teach only vocational subjects. These are the ones who would take to the life-boats.

Both of the remedies seem unwise and inadequate. The mere reduction of the curriculum in bulk is not a cure for the ills from which we suffer. The vocationalizing of the common schools is the exploitation of a noble institution for greed and gain. The mission of the elementary school is to put the children of all the people in possession of those ethical and cultural ideals which constitute civilization. It is so busy teaching children how to live that it has no time to teach them how to make a living.

The study presented in this volume is intended to show how foreign nations and certain American communities have solved or have tried to solve the problem of vocational education. The

work was undertaken originally in connection with a course of lectures on School Administration given by the author in New York University. It is believed that the discussion will be useful to students of education anywhere, as well as to the general public. The employer, the employee, the taxpayer, the publicist, the legislator, are all profoundly interested in the questions here presented.

There is at present no single volume which gives a systematic survey of the general field of vocational education, embodying both the historical and the logical aspects of the subject. A vast body of material has been accumulated, but it lies scattered in magazines and monographs printed in many languages. This handbook is a digest of some of the most important of this literature. In this day of agitation and clamor for change, the greatest need is accurate information, a proper perspective, and a judicial consideration of values. The Nation has poured millions into its common schools ungrudgingly. Now it asks: "What lack I yet?" In a matter of such great importance deliberate action in the light of complete knowledge is imperative. For,

as Bacon has written, "Whoever too hastily catches at certainties shall end in doubts, as he who seasonably withholds his judgment shall arrive at certainties."

JOSEPH S. TAYLOR.

July 1, 1914.

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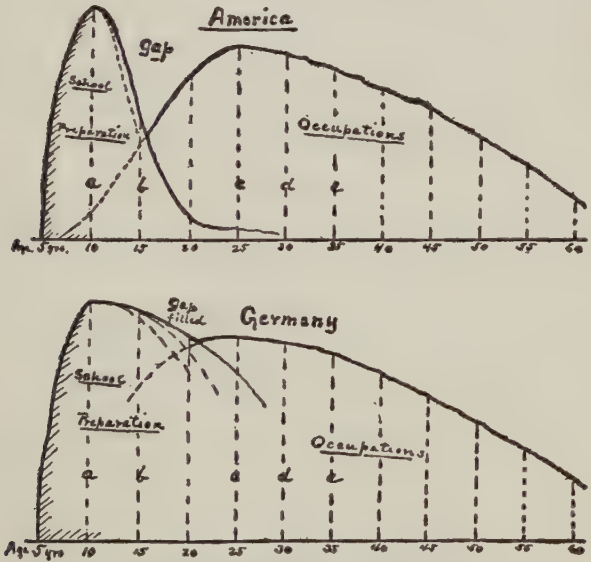
CHAPTER I

INTRODUCTION

I. Equal Opportunities for All. — One of the fundamental principles underlying a public school system is that it shall offer equal opportunities for all. The American public school boasts of this as one of its characteristic merits. An examination of the facts shows the claim to be unfounded. The opportunities are equal only in the sense that all classes may freely partake of the common training given in the elementary school. Beyond that there is no longer even a pretense of maintaining equality of opportunity. For the fortunate few whose ambition and economic condition impel them to prepare for a profession, the state has opened high schools leading to colleges and professional schools. Colleges are often free to this class of students.

Teachers are everywhere trained in tax-supported institutions. But the boy who is obliged for whatever reason to become a wage earner at fourteen is not so fortunate. In New York the law compels him, if he is not a graduate of the elementary school, to attend an evening school, there to pore over books after a day's labor. But it seldom offers him preparation for the kind of work he is doing. The girl who leaves at fourteen is no better off. She is, so far as the State is concerned, allowed to shift for herself. There is no further assistance from the school, unless she voluntarily goes to an evening school. Even then she is fortunate if she finds anything that will make her more efficient as a wage earner or helper in the home. In short, the few receive preparation for life's duties at public expense; the many are turned out of the schools without such preparation. The enlightened nations of Europe have closed up the gap between school and industry. By a system of special schools and government-regulated apprenticeships, school and vocation interlock, so that no time is wasted in the new adjustment. In our country this gap is wide open. The pupil leaves the school and then gropes around to find life's work. It may take him years to do it;

and he may never drift into the particular thing for which he is best adapted. The years between fourteen and sixteen are largely wasted, because



Relation of School to Industry.[1]

what was learned in the elementary school is soon forgotten, and no new form of instruction is provided to supplement it. There is no supervised apprenticeship system which insures thorough training in a vocation. In this condition we find the majority

[1] The author cannot vouch for the accuracy of this diagram; but there is no doubt in his mind that the facts correspond in a general way with the graphic representation, which is taken with permission from Hodge's *Association Educational Work.*

of the male youth of our land, who are soon to become the governing class. The illustration on page 3 is a graphic representation of the relation of the school training of males and their vocations. It is based on census and other government reports. The verticals *a* and *b* show the number of boys in school at the ages of ten and fifteen in North America and Germany. The verticals *c*, *d*, and *e* show the number of males as wage earners. Line *b* is the significant feature of the graph. Note the difference between this line in the two diagrams. In America the boy wastes his precious years between fourteen and sixteen in idleness or unskilled and uneducative employment. In Germany he transfers from the public day school to an apprenticeship regulated by the government, with supplementary technical training in a compulsory continuation school. In this way the gap shown in the American curve has been almost entirely removed from the German curve.

In a recent address before the National Society for the Promotion of Industrial Education, Professor Carver of Harvard University said: —

"In the present conservation movement it is highly important that we realize two things: first, that our most valu-

able resources are our people, and second, that we are wasting people more than we are wasting anything else. . . . If one will look carefully about he will see, in any community, so many ways in which labor-power is being wasted. . . . There are, first, the army of the unemployed, or the involuntarily idle; second, the imperfectly employed, or the untrained; third, the improperly employed, or the acquisitively rather than productively employed; and fourth, the voluntarily idle, commonly known as the leisure class."

II. **Training for Citizenship.** — The State cannot continue to spend vast sums on high schools and universities and neglect vocational training without repudiating the reasons usually given for maintaining schools of any sort as a public charge. Self-preservation by training future citizens is the justification of the State for spending money on schools. We have come to a point where the State must enter the field of industrial education, and thus give equal opportunity to artisan, farmer, merchant, and professional man. Justice to the individual and the welfare of the State both demand this course.

There is sound psychology and profound philosophy in the saying, "Nothing succeeds like success." The man who is riding on the tide of success sees rainbows on every leaden sky. He

becomes an optimist. "God's in his heaven — all's right with the world." He is a spring of joy to his family; he becomes a good neighbor and a delightful companion. His health is good, his mind is clear and alert. He is the potential, if not the actual, good citizen. But now let adversity come to him. Let him fail in his chosen endeavor and lose his fortune or his position. Convince him that he has mistaken his calling, that he can never succeed in his present vocation. Get him thoroughly discouraged. Then what happens to him physically, mentally, and morally? He at once becomes a pessimist. He sees a cloud of disaster behind every bow of promise. He is moody and irritable, so that his own children are afraid to speak to him. He shuns his neighbors. He thinks of nothing save his own misfortunes. His health declines. He has neither appetite nor the power of digestion. He envies others more fortunate than himself, and walks the streets with bitterness in his heart. His hand is against every man, and he feels that all the world is against him. He is not the material out of which good citizens are made. He recognizes no duties to society because he thinks society is unjust to him. He

may drown his sorrow in debauchery, join the ranks of criminals, or seek refuge in suicide.

1. *The Habit of Success.* — Dr. Luther Halsey Gulick has a chapter in one of his books on *The Habit of Success*, from which the following is quoted: —

"The principle of the habit of success is constantly demonstrated in athletics. In practicing for the high jump, the beginner will start with the stick at that height at which he can jump it easily, and he will raise it every time that he clears the stick, so that he must always jump higher. And when by the greatest effort he succeeds in clearing the stick at his approximately greatest height, he will put it still an inch higher — at a point where he must of necessity fail. For a long time he will struggle under conditions where failure is almost inevitable. This excess of effort always means the use of unnecessary muscles and combination of muscles in the endeavor to find some better way to jump. That disturbs that precision of movement which is essential to any first-class athletic performer. It is known as 'form.' The result is that through his excess of effort he never learns to jump as well as does a boy who most of the time jumps within his ability and who thus acquires perfect form, perfect control. This is not to say that a good jumper never tests himself; he does. But the bulk of his work is done under conditions where he can succeed, where he can carry his body in the most perfect form." [1]

[1] *Mind and Work*, by Luther H. Gulick, Doubleday, Page & Co., 1908, p. 8.

2. *The Munich Idea.* — This is the foundation upon which Dr. Kerschensteiner has erected his system of vocational training in Munich. "Moral forces, like skill in work, grow on no other soil than joy in work," says the Herr Direktor. "The joy of work," he continues, "which diffuses itself throughout these schools must not be placed only in the service of intellectual and technical training, but no less in the service of moral training, or, as I call it, of civic education. For this reason the instruction must be organized as early as possible from the standpoint of a free community of labor." [1] That is, there is to be team work in the school, numbers of students being engaged on a common piece of work. This develops the fundamental virtues, the essence of which is, the spirit of social service, joy of achievement, and loyalty to the work and interests of others. The deep significance of vocational training from the point of view of the State is thus revealed. To give to the embryonic citizen a taste of the arts of leisure and refinement, without providing him with skill by which to secure these things, is to sow the seeds of

[1] *Three Lectures on Vocational Training*, by Dr. Georg Kerschensteiner, The Commercial Club of Chicago, 1911.

discontent. We try to make good citizens by giving formal lessons in civics. But a knowledge of the institutions of the country and of the rights and duties of the citizens does not in itself suffice to make a citizen. "A man may even be an admirable teacher of civic science and a first-class villain at the same time." [1] But skill in some art which he delights to practice, and on which he can rely for the means of livelihood, results in the formation of those physical, moral, and intellectual habits which constitute the texture of noble manhood.

Speaking of the perfection of workmanship in the arts and crafts of the thirteenth and fourteenth centuries, Dr. James J. Walsh says: —

"The supremely interesting feature of this popular education was its effect upon the lives, and minds, and happiness of the workmen. Men got up to their work in the morning not as a routine occupation in which they did the same things over and over again, until they could scarcely do them any more, and then came home to rest from fatigue in weariness of mind and body. . . . They came to their work with an artist's spirit, hopeful that they would be able to express in the material what they saw so clearly with their mind's eye. It was tiresome working, but the hours were not long, and always there was the thought of accomplishment worthy of the

[1] Kerschensteiner, *op. cit.*, p. 14.

cathedral or the abbey or the town hall, worthy to be placed beside the masterpieces in the best sense of that dear old word, that their fellow workmen of the other gilds were accomplishing around them. . . . When technical schools can lift men up to this plane, then, indeed, there is a chance of happiness even for workmen." [1]

III. **America a Mere Stevedore.** — The editor of *Vocational Education* [2] recently published an editorial on the present economic and commercial status of the United States, from which the following is quoted: —

"It may be a shock to our characteristic American jingoism to be told, what is undoubtedly true, that with the most intelligent body of workers in the world and the most efficient, if properly trained, we are little else than a huge stevedore, bearing down to the ships of the sea crude and semi-crude materials for the employment of the capital, labor, and intellect of foreign nations, and that those who are best informed see within a period, which to the far-sighted is only a day, our wonderful country importing these same materials, and our producers handicapped by excessive cost. The battles of the future between nations will be fought not with Dreadnaughts but with the products in the markets of the world. The nation will be victor, with all that such a victory means to the life of its people, which is able to put the greatest amount of brains and skill into its product. The great

[1] *Education: How Old the New*, by James J. Walsh, New York, Fordham University Press, 1910, p. 169.

[2] Vol. 2, p. 142.

commercial nations of the world have already entered upon extensive schemes of practical education. Germany boasts that within ten years there will be no such thing as an untrained workman, from chimney sweep to high-grade artisan, in the empire. Of the 20,000,000 workers in the United States, it is safe to say that not 25,000 have any opportunity to secure proper education of the kind that Germany gives for their callings. We have practically no schools to meet their needs. It has been truly said that, in most of the states of the Union at least, the only way in which a boy or girl can secure an industrial training is to be born feeble-minded or commit a crime!"

IV. **The Industrial Revolution.** — Two factors have operated to modify, practically to revolutionize, the economic status of the wage earner within the last sixty years. These factors are (*a*) the substitution of machinery for hand labor, and (*b*) the aggregation of capital and the subsequent concentration of manufacturing into enormous establishments and centers of production. From the colonial days down to within our own time, farming was the most important industry in our nation, and the farmer's boy generally expected to remain on the farm and was satisfied to do so. Many of the manufacturing industries were established on the farm and were thus widely distributed. The author recalls, for instance, the fol-

lowing industries operated in connection with farming, within a radius of a mile or two from his own home: tailoring, shoe making and cobbling, carriage making, house painting, blacksmithing, tinsmithing, cider making, bee culture, carpet weaving, carpentry, cabinet making, milling, saw-milling, harness making. The more enterprising of the farmer's sons learned one or another of these trades, and when farm work was slack they worked at their trade, thus occupying their idle moments and increasing their incomes. They were satisfied to stay on the farm and happy in the work.

How was it with the farmer's daughter? She worked on the farm and expected nothing else. She helped in the dairy, and did all kinds of domestic service gladly. She even sometimes helped in the field during busy times, and "raked the meadow sweet with hay." She felt it no disgrace to work with her hands, and frequently she took service at a neighboring farm, being treated in all respects as a member of her employer's family. She learned to sew and make her own clothes, and patched the coverlid for the bed, which was quilted at a "party," the neighboring dames being invited to the number of fifteen or twenty. The quilting

was completed in a single afternoon and ended with a feast and dance, to which the husbands and swains were admitted.

Now contrast present conditions with the picture just presented. Cities have multiplied and increased in population, so that now thirty-two per cent of all the children enrolled in our public day schools live in cities of four thousand inhabitants or more. At least half the population lives in villages or cities. The city has become the manufacturing and distributing center. The farmer shoemaker has disappeared, and the farmer's shoes are made in Massachusetts. The handloom and the spinning wheel have been sent to the museum. The farmer's cloth is woven in New England, and his clothes are made in New York by people who come from Russia. His wagon comes from South Bend, Indiana; his furniture from Michigan; his carpet from Philadelphia; his lumber from Oregon; his flour from Minneapolis. Instead of hiring a dozen neighbors to cut his grass and cradle his grain, he drives a self-binder through his field which drops the sheaf ready to be stacked and garnered. If he be one of those prairie farmers of the West, he drives twenty horses attached to a monster

machine which cuts, threshes, cleans, and bags his grain in a single operation.

The number of manufacturing establishments has increased since 1860 only fifty per cent; while the value of the manufactured product has increased over seven hundred per cent, in the same time. This means that the average factory turns out fourteen times as much as it did fifty years ago. The farmer's sons and daughters are educated in the district school, the township high school, the college, or State university. They enter one of the professions or drift to the cities to take part in commercial or industrial pursuits. They no longer like to labor with their hands. The boy does not care to farm, the girl is not expert in the domestic arts. "It is bad enough," says Commissioner Draper, "for an attractive Miss to be unable to make a loaf of bread, or broil a steak, or use a needle; the limit is passed when a college makes her such a little idiot as to think it is smart to boast of it." [1]

The children of the city are all dreaming of professional or intellectual pursuits. They no longer learn trades. Two thirds of them leave to go to

[1] *Industrial and Trades Schools*, New York State Education Department, 1908, Dr. Andrew S. Draper, Commissioner of Education.

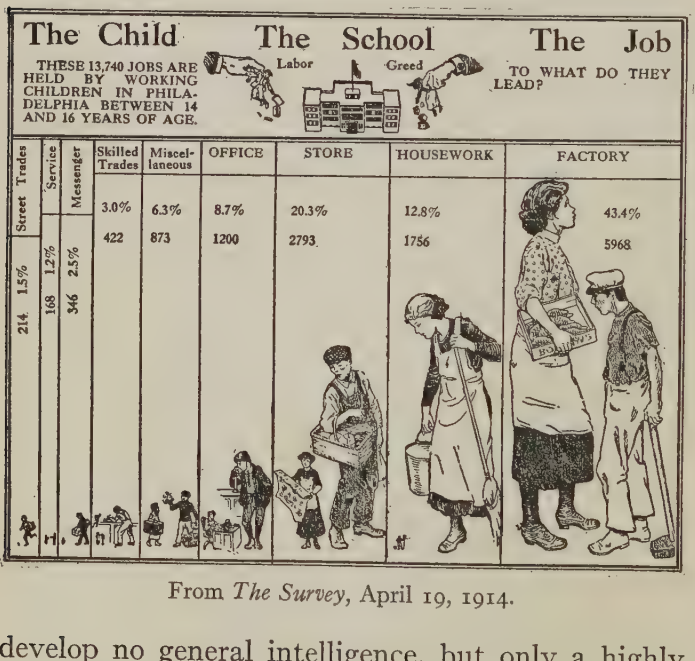
work before they have graduated from the elementary school. They have very little knowledge of books, and they do not know how to do anything with their hands. The boy becomes a messenger, office boy, grocery boy, or butcher's boy; the girl goes to some mercantile or manufacturing establishment to begin a dreary life as a wage earner in an ill-ventilated and ill-lighted shop or store.[1]

The wages they receive at first hardly suffice to pay the car fare. If they go to a factory, they learn to operate a single machine; but they get no comprehensive insight into the manufacturing process as a whole. As Emerson says: "Man is thus metamorphosed into a thing, into many things. The planter, who is Man sent out into the field to gather food, is seldom cheered by any idea of the true dignity of his ministry. He sees his bushel and his cart, and nothing beyond, and sinks into the farmer, instead of Man on the farm.

[1] Miss Alice P. Barrows in *New York Times*, March 2, 1913, reports as follows:—

"Of the 302 children studied, twenty-four were still in school, thirty-nine had not gone to work. They had either stayed at home or gone to business or trade school. Two hundred and thirty-nine had gone to work. They had entered 406 jobs. Of these jobs, ninety-four were 'outside' errands; nineteen were 'on wagons'; sixteen at newsstands; twenty-nine were in department stores; twenty-seven in office work; forty-four in miscellaneous inside work, and 177 in manufacturing."

The tradesman scarcely ever gives ideal worth to his work, but is ridden by the routine of his craft, and the soul is subject to dollars." Children set to work at a machine or at some partial process



From *The Survey*, April 19, 1914.

develop no general intelligence, but only a highly specialized skill. When work in their particular line is slack, they find themselves out of employment, with no power to do anything else. They become discouraged, and grow up to join the ranks of the discontented, the dependent, or the delinquent.

CHAPTER II

INDUSTRIAL EDUCATION IN EUROPE

I. England

1. *The Beginnings.* — In England there was no national system of public education until 1870, when Parliament enacted a law which insured elementary education to all the children in the land. In 1770 Burke deplored the tendency shown by Parliament to exercise control upon the people, whereas "it was designed as a control for the people." This remark of Burke's reflects the attitude of the rising democracy of England at the time. During the following century the democratic forces assumed an aggressive attitude and finally triumphed in the Act of 1867, which decided once for all that the British government, though monarchical in form, should in reality be democratic. Then followed the usual corollary, that if the people are to rule they must be educated; hence three years later Parliament established a national system of schools.

2. *Private Industrial Education.* — The beginnings of industrial education in England may be traced to Dr. George Birkbeck, professor of natural and experimental philosophy at the Andersonian Institution in Glasgow. He conceived the idea of establishing free lecture courses for the dissemination of scientific knowledge among the working classes. Between 1815 and 1825 Mechanics' Institutions were founded in all parts of England to the number of two hundred and twenty. Some of these were kept alive long enough to be converted into technical schools. Others degenerated into clubs; still others died. Very few succeeded to the extent expected by their founders. The principal reason for the failure of the movement was that those who were intended to benefit by the lectures did *not possess even the rudiments of an education;* and hence they received little profit from their instruction. These lay efforts therefore proved futile, and nothing durable resulted except the two or three technical schools into which several of the Mechanics' Institutions were converted.

3. *Public Industrial Education.* — In 1837 the Committee of Trade secured the sum of $7500



"A Study in Action"—Forge Practice, Vocational School for Boys, New York.

out of the public treasury for the establishment of a central Government School of Design, and in 1841 several provincial schools of design were organized with the aid of government grants. But the efforts of the national government in this field were desultory and insignificant until 1851. In that year an International Exhibition was held in Hyde Park. The comparison of products there shown proved England to be sadly deficient in manufactures; and therefore the profits of that exhibition were devoted to the purchase of land at South Kensington and the opening in 1853 of the " science and art department " of the now famous South Kensington Museum. The department was created to control and organize industrial education. In the absence of a system of secondary schools, it was necessary to make elementary education the foundation of industrial training. But at this time all the elementary schools were still provided through voluntary effort, and so inadequate was the provision made for the education of the people, that even in 1870, in the city of London itself, scarcely more than fifty per cent of the school population found accommodations in the schools. In 1856 the Education Department was created,

and the Science and Art Department was transferred to the new Education Department, which henceforth controlled primary and industrial education. In 1870 Parliament, as we have seen, passed the law which made provision for primary schools at public expense sufficient in number to meet all the national needs.

During the first half of the nineteenth century the secondary schools and universities of England provided nothing but classical courses. Their object was to educate gentlemen and scholars. The idea of utility never entered into their calculations. The students rarely were required to earn a living, and so it never occurred to the authorities that it was part of their duty to prepare pupils to meet the more practical demands of life.

After the Act of 1870 the Science and Art Department was commissioned to remodel the classical secondary schools, so that they might offer a suitable foundation for industrial education. A large number of the old grammar schools found themselves, after 1870, without the necessary financial resources to provide a modern secondary education, and so the government decided that financial aid should be given to those schools under

the regulations of the Science and Art Department. But this Department was only permitted by law to aid technical education; consequently it could only give assistance to day schools in consideration of the technical education they provided. Special programs were promulgated giving definite plans for vocational studies in the upper grades of the elementary schools.

In 1890 an act was passed giving County Councils authority to aid industrial education in elementary and secondary schools by local taxation. The work is always referred to as "science and art," by which is meant the industrial bearing of drawing and science. The impetus given in this way to industrial drawing, industrial design, and industrial physics and chemistry has meant much to England in her development of manufacturing industries during the last quarter of a century.

(1) *Organization.*—Since the Education Act of 1902[1] a system of industrial training adapted to the needs of all the children has been gradually developed. In most of the English cities handi-

[1] See *Teachers College Record*, Vol. 12, Columbia University, 1911, p. 33.

craft work for boys and domestic economy for girls has been provided, with well-equipped shops and laboratories. There is great variety in details of curriculum and method, but generally the purpose of the work is avowedly vocational. In London the children of a group of schools go to "centers" for this special work, where the proper equipment is found. In 1909 accommodations had been thus provided for more than eighty per cent of all the children. Handwork in wood and iron combined with drawing is given to all boys who have reached Grade VI and are eleven years of age, as well as to all boys twelve or more years old below Grade VI. Girls in Grade V and twelve-year-old girls below Grade V become eligible to take domestic economy, consisting of cookery, laundry work, and housewifery. A full half day each week is usually given to industrial work. Most of the courses are planned to cover two or three years. The city of London has been divided into sixty districts, each of which is to have a "center." Up to 1912, thirty-nine of the schools had been established, thirteen with an industrial basis, thirteen with a commercial basis, and thirteen with both an industrial and a commercial

basis.[1] Children in grades lower than the fifth have the sort of manual training with which American teachers are familiar; namely, paper folding, cardboard construction, wire work, cord work, modeling, and sewing.

Most of the well-known secondary schools, like Eton and Rugby, have retained their distinctly classical character. St. Albans is a notable exception, having been "modernized" by the introduction of science, practical mathematics, and industrial arts. In 1881 the government stimulated local initiative by offering grants for the organization of science schools of secondary rank. In 1889 authority was given to County Councils to assist vocational education of all grades by local taxation; and in 1890 Parliament supplemented the efforts of local authorities by offering a government grant. As a result of this legislation many high schools are now offering strong courses in science, drawing, and shopwork. Many schools of a distinctly industrial type, such as the Central School of Arts and Crafts in London, have also been established.

Finally, there are numerous continuation schools open chiefly in the evening. London has a total

[1] *Vocational Education*, Vol. 1, p. 176.

of two hundred and seventy-four evening schools divided into three classes, as follows: —

(*a*) *Free Schools.* — These are like our own public evening schools, offering instruction in the common branches, and industrial training, such as first aid, home nursing, cooking, laundry work, millinery, dressmaking, drawing, wood and metal work.

(*b*) *Ordinary Evening Schools.* — In these schools more advanced instruction is given in the subjects enumerated above, as well as training in commercial subjects, English, and foreign languages. The student pays a shilling a session. These schools are open three nights a week from 7.30 to 9.30. For commercial courses the fee is two shillings sixpence.

(*c*) *Science and Art Centers.* — Here work of elementary and intermediate grades is offered in science and art subjects leading up to advanced courses in technical institutions and schools of art. The fee is five shillings a session, and the schools are open four nights a week.

The fee system is a matter for serious consideration. In New York all evening schools have heretofore been absolutely free. But in his report

for 1911–1912, District Superintendent Shiels, in charge of evening schools, after a thorough investigation, recommends "legislation that will permit . . . the Board of Education to require fees for attendance." Philadelphia charges a fee of fifty cents for elementary schools and one dollar for evening high and trade schools. This fee is returnable if the pupil attends two thirds of the sessions. St. Louis charges one dollar per term of twenty weeks for all pupils. Boston follows the plan of Philadelphia, but collects no fee from compulsory pupils. Cleveland collects one dollar for high schools, returnable after an attendance of 75% of sessions, and five dollars for technical schools, returnable after an attendance of 85% of sessions. Buffalo follows the system of Philadelphia, but requires an attendance of 75% of the sessions before the fee is returned. Many cities charge a fee for supplies or a deposit to insure against damage of equipment. Such is the practice in Philadelphia, Buffalo, Cincinnati, Detroit, Milwaukee, Newark, Minneapolis, Seattle, and Tacoma.

II. Scotland

In the opinion of Mr. E. G. Cooley, formerly Superintendent of the Chicago Public Schools, who has made a thorough study of vocational education in Europe, " only two countries in the world, Germany and Scotland, have shown by their works that they really believe in education as a factor in human efficiency and human happiness. Both carry on commerce and industry as a science and art and not by rule-of-thumb." [1]

1. *Organization and Supervision.* — The Scottish Education Act relating to vocational schools provides: —

(1) That it shall be the duty of school boards to make suitable provision in continuation classes for the further instruction of young persons above the age of fourteen years with reference to the crafts and industries practiced in the locality.

(2) That school boards may be penalized by withholding appropriations for failure to establish continuation classes.

(3) That school boards may make attendance compulsory up to the age of seventeen.

[1] *Vocational Education*, Vol. 2, p. 141.

(4) That employers must report to the school board at specified times, stating particulars as to the hours during which young persons are employed.

(5) That employers must provide time for attendance of young persons at the continuation school, and must count the hours spent in such classes in computing the hours of employment of such young persons.

(6) That parents must coöperate with the school board in carrying out the law.

The Scotch Education Department is at present engaged in organizing vocational schools under the terms of this act. Several features of the law are especially significant. It will be noticed, in the first place, that continuation schools are in charge of the regular school board, and not of any special body, as is usually the case in Germany and as is provided by the laws of Wisconsin. While the act does not make attendance compulsory, it authorizes compulsion through the school boards. Both the employer and the parent are required to coöperate in the enforcement of the law. It does not provide for day instruction; but the tendency will be to promote this most important phase of

the work, since the employer is obliged in any case to count school time as a part of the working time.

2. *The Continuation Schools of Edinburgh.* — The city of Edinburgh has a complete system of continuation schools. These are classified under four divisions, as follows: —

Division I. — Open to pupils from fourteen to sixteen years of age. The subjects of instruction are English, arithmetic, civics, hygiene, drawing, woodwork, commercial documents, needlework, cookery, laundry work, dressmaking, millinery.

Division II. — Open to pupils over sixteen, or under sixteen if they have certain scholastic qualifications. The studies are English, geography, history, civics, foreign languages, commercial subjects, drawing, modeling, mathematics, science, applied mathematics, handwork in wood and iron, ambulance work, physical training. The class in each subject must have at least one session a week. In the case of science, applied mathematics, and handwork, the length of the session is at least one hour and a half; in all other cases, one hour.

Division III. — Open to students over seventeen years of age who are certified by His Majesty's Inspector to be qualified, etc. Courses in this

division, in order to be recognized, must extend over three or more years. The subjects of instruction are designed to fit the pupil for the intelligent practice of crafts, industries, or occupations. The course includes commercial subjects, art and art crafts, engineering of various kinds, naval architecture, navigation, building trades, textile industries, chemical industries, printing, women's industries, agriculture.

Division IV. — Consists of "auxiliary classes," including physical culture, military drill, vocal music, woodcarving, fancy needlework, elocution. These courses are open to all students not included under the compulsory provisions of the law.

Edinburgh has twenty-five of these evening continuation schools, six of which are for girls and young women, six for boys and young men, ten for both sexes, and three for adults over twenty. There are 421 teachers, 122 of whom have regular teachers' certificates. For the remaining teachers the Board of Education provides lectures on the art of teaching with demonstration lessons. The schools are in session for a period of twenty-six weeks from September to March.

In all the schools except those for adults, a fee

of five shillings per session is demanded, which is returned at the end of the term to pupils credited with satisfactory progress and conduct and 80% of attendance.

Concerning this system of schools Mr. Cooley remarks: "One is impressed by the thoroughness with which the Scotch have undertaken the work of vocational education. While the Germans have accomplished more on account of larger experience and more favorable conditions, the Scotch in Edinburgh have developed a plan that compares favorably with that of most German cities." [1]

III. Germany

International exhibitions are useful, among other things, for teaching nations their shortcomings. The beginnings of industrial education in England grew out of the exhibition in the Crystal Palace of London in 1851. The World's Fair held in Philadelphia in 1876 was destined to have a similar effect upon Germany. After viewing the exhibits at Philadelphia the courageous German Commissioner, Professor Reuleaux, cabled Prince Bismarck: "Our goods are cheap but shabby."

[1] *Vocational Education*, Vol. 1, p. 242.

This was the stimulus that started a systematic campaign in the twenty-six German states for technical education. The results, after forty years of experiment, are the wonder of the world.

1. *Organization.* — With respect to grades, vocational education of Germany is classified as higher, middle, and lower. In the class termed higher are 21 universities with their professional departments; 11 technical high schools; and 5 commercial high schools. Of the middle technical schools there is a great variety, some of which are enumerated in the following list: —

Agriculture	11	Mining and Metal (Prussia)	10
Art Industries	34	Naval Architecture and Engineering	12
Building and Engineering Trades	52	Navigation	19
Ceramic Industries	4	Ship Engineers	8
Commerce	429	Textile Industries	103
Forestry	5	Woodworking Industries	12
Metal Industries	12		

The object of all these middle schools is to train experts, foremen, superintendents, owners, managers, salesmen, etc.

Below the middle schools are the lower schools, designed to train apprentices, artisans, operatives, and to extend the technical knowledge and skill of

journeymen and master workmen. The total number of such schools, excluding continuation schools of an industrial character for young women, is about 25,000. The number of students is 1,336,000. The annual expenditure for the support of the lower schools is $5,236,000.[1]

In Germany such schools are called *Fortbildungsschule*, which term has generally been translated *continuation* school or *improvement* school. Several writers make a distinction between the two English equivalents, using the term *continuation* when they refer to schools which merely continue the teaching of the common school, and the term *improvement* when they refer to an industrial school.[2] An Imperial Law affecting all parts of Germany forbids the employment of children under seventeen in factories and workshops. A similar law decrees that masters in any branch of industry are bound to allow their workers under eighteen to attend an officially recognized continuation school for the time fixed as necessary by the local authorities. By the same law the Local Council is empowered to make attendance at a continuation school compulsory for

[1] U. S. Commissioner of Education, *Report*, 1913, Vol. 1, p. 818.

[2] See *The Industrial Improvement Schools of Wurttemberg*, by A. A. Snowden, Teachers College, N. Y., 1907.

all male workers under eighteen. In South Germany there is no city or town, however small, without one such school, at least for boys. In North Germany, Essen is the only larger town in which such a school is wanting. In Bavaria, Wurttemberg, Saxony, Baden, and Hesse, attendance at a continuation school is compulsory for all youths up to the age of sixteen, seventeen, or eighteen.

Dr. Kerschensteiner expresses the opinion that a properly organized continuation school "must extend to the eighteenth year of every boy or girl who is not being educated in a higher school." [1] The reason he gives for holding such an opinion is based on the public good. "It is of no advantage," he says, "to a constitutional State to make its opportunities of culture accessible to only a small percentage." Mr. John M. Shrigley, Principal of the Williamson Free School, agrees with Dr. Kerschensteiner, as to the need of keeping the pupil until he is eighteen, but for a different reason. He says: "If a school proposes to graduate journeymen, the pupils must be sufficiently matured physically and mentally on graduation to do men's work. They

[1] *Three Lectures on Vocational Training*, by Dr. Georg Kerschensteiner, The Commercial Club of Chicago, 1911, p. 17.

must have the appearance as well as the qualities of manhood to merit a man's pay." [1]

Everywhere the schools receive the willing support of governments. The State subsidies for continuation schools in Prussia increased from half a million marks in 1885 to three million marks in 1908. The number of pupils in the schools of Prussia during the same period increased from 58,000 to 360,000. In 1911 the State appropriations for continuation schools in all Germany was six and a half million marks.[2] In Wurttemberg a law was passed in 1906 requiring every town of more than five thousand inhabitants to organize continuation schools for all apprentices in commerce, industry, and trade. Bavaria is preparing a similar law to transform the compulsory Sunday schools for apprentices, which have existed for the last hundred years, with two hours of instruction, into continuation schools with six hours of instruction.[3]

2. *Supervision.* — The vocational schools of Germany are not under the direction of the Minister

[1] *The Organization and Management of Trade Schools*, National Society for the Promotion of Industrial Education, 1908.

[2] U. S. Commissioner of Education, *Report*, 1913, Vol. 1, p. 818.

[3] *Three Lectures on Vocational Education*, Georg Kerschensteiner, The Commercial Club, Chicago, 1911, p. 9.

of Public Instruction, but under the Minister of Commerce and Public Works. They are not an organic part of the state system of public education. They admit pupils only after the age of fourteen. The continuation schools are day, evening, or Sunday schools. The course of study is not uniform throughout the empire or even throughout a State, but is left to the option of the local community. The schools are not subject to uniform regulation. When a community has established a school of this kind and can show that it meets a local need, the central government is asked for a subsidy, which is rarely denied. Industrial schools of secondary grade are all day and evening schools and are located chiefly in centers of industry.

3. *The Continuation Schools of Munich.* — Munich supplies an example of the most successful and complete system of vocational training to be found even in Germany. A study of the organization and management of these schools is therefore one of the necessary steps to a proper understanding of this form of education. The origin of the continuation schools in Munich dates back to 1875, when two of them were founded, one for apprentices and one for journeymen. The former was made compulsory

for boys between thirteen and sixteen, and gave from five to eight hours of instruction per week. No regard was paid to the pupil's trade. The school was open for five hours on Saturday and three hours on one afternoon of the week. The subjects were reading, writing, arithmetic, and drawing. It will be seen that they were substantially identical in aim with our evening classes for common branches.

Similar institutions arose all over Germany. But their barrenness soon became notorious. They have nearly all been replaced by trade continuation schools. Every child is now trained with reference to his particular craft. Munich has a population of 580,000 and has 70,000 children in her elementary day schools. Education in common schools is compulsory for girls up to the age of thirteen, and for boys up to the age of fourteen. The continuation school follows the elementary school, and is compulsory for boys to the age of eighteen, and for girls to sixteen. They give from eight to ten hours of instruction to boys and six hours to girls. They charge no fees. The compulsory continuation school is followed in turn by the optional continuation school for persons over eighteen, which charges a fee of from fifty cents to a dollar per month and

gives twelve hours of instruction weekly. The attendance of the several kinds of schools in 1910 was as follows: —

Compulsory continuation schools for boys	9400
Compulsory continuation schools for girls	7500
Voluntary continuation schools for young men	2600
Voluntary continuation schools for young women	3700

Munich has about one eighth of the population of New York City. If, therefore, New York made the same provision for the training of her young people that Munich has made, we should have in our several day and evening vocational schools 75,200 boys between the ages of fourteen and eighteen; 60,000 girls between the ages of thirteen and sixteen; 20,800 young men over eighteen; and 29,600 young women over sixteen; or a total of 185,600 persons. What New York is actually doing at public expense is shown by the following table of registers of the several day and evening schools in which vocational instruction is given: —

Mentally Defective and Cripples (1913)	3,000
Vocational Day Schools (1913)	2,096
Day High Schools (1913)	18,488
Evening Elementary Schools (1913)	10,879
Evening High and Trade Schools (1913)	13,989
	48,452

This is 26% of what is required to bring New York up to the Munich standard. Approximately 52,000 girls receive lessons in cooking in the day elementary and high schools and some 52,000 boys are getting shop work in the elementary schools. All the girls of the first six years have lessons in raffia and cord work or sewing. Vocational exercises form part of the program of our vacation schools, with 18,723 on register (1913) and of the vacation playgrounds having an average attendance of 133,000 (1913).

There are, in addition to these public institutions, numerous private schools giving vocational training to the youth of the city, of which the following is a partial list: —

(1) Baron de Hirsch Trade School.
(2) Clara de Hirsch Trade School.
(3) Teachers College.
(4) Pratt Institute.
(5) Cooper Union.
(6) All the branches of Y. M. C. A. and Y. W. C. A.[1]
(7) Hebrew Technical Institute.

[1] During the school year 1912–1913 the Y. M. C. A. of the United States gave 120 vocational courses to 72,842 employed men and boys, who paid $714,035 in tuition fees. — *Report*, U. S. Commissioner of Education, 1913, Vol. 1, p. 579.



A Class in Modeling and Sculpture, New York Evening School of Industrial Art.

(8) Hebrew Technical School for Girls.

(9) Henrietta Trade School (Negro).

(10) Italian Evening Trade School.

(11) Mechanics' Institute (evening industrial).

(12) New York Industrial Evening School (Negro).

(13) New York Trade School.

(14) Pascal Institute (Girls).

(15) Preparatory Trade School.

(16) R. H. Hoe & Co. Apprenticeship School.

(17) St. George's Evening Trade School.

(18) New York University School of Accounts and Finance.

(19) Young Men's Hebrew Association.

(20) Brooklyn Evening Technical and Trade School.

From the above list it is apparent that private initiative has supplied a part of the need for special education. But putting together all that is now done through both public and private agencies, it is doubtful whether New York offers more than half of the opportunity for vocational education that is found in many a European city.

(1) *Supervision.* — A trade school is established in Munich for every trade that has twenty-five or more apprentices. At present fifty-two trades are

provided for. The trade schools are grouped under the supervision of nine head masters or directors, with subdirectors for each single school. Trades with a great number of apprentices have at their disposal several schools in different parts of the town to avoid the necessity of extended travel. The only exception is that twelve hundred commercial apprentices are housed in a single building in the center of the city.

(*a*) *Employers' Associations.* — To most trade schools is attached an association of employers, who bear the expense of school material, take part in the arrangement of the courses of instruction, propose technical teachers, assist in the supervision of practical subjects, coöperate in the examination of apprentices, and generally act as promoters of the school.

(*b*) *Continuation School Board.* — Each continuation school possesses its own local school board of five members, consisting of the head master of the school, a member of the municipality, and three employers of the trade. It is the business of this board to manage the affairs of the school, and especially to keep a watch on the regularity of the attendance.

(*c*) *Cost of Continuation Schools.* — The annual expenditure for the maintenance of trade schools for boys and men, aside from building expenses, is $225,000, or about $19 per pupil; whereas the cost of day elementary education is $23 per pupil, and of secondary education, $50 per pupil. The elementary school is supported by the town; the secondary school is supported chiefly by the State; and the continuation school is supported by the town and State together. The entire cost of the continuation schools for girls and women, amounting to $100,000 per annum, is borne by the town alone.

A comparison at this point is interesting. Munich pays $19 per pupil to educate men and boys in their trades; New York pays $180.45 per pupil to train a pupil in its Vocational School for Boys. Munich pays $9 per pupil to educate girls in their vocations; New York pays $75.65 to train a pupil in the Manhattan Trade School for Girls. Munich pays $23 per pupil for elementary education; New York pays $34.78. Munich pays $50 per year for a secondary pupil; New York pays $92.85. A thorough investigation of the cost of industrial education in the United States by H. C. Brandon

shows that the median cost of such training in the present schools is $4.80 per pupil per month, or $48 per year of ten months. The proportion of expense devoted to teaching and supervision is nearly the same as in common schools, or 73% of the total expenditure.[1]

IV. France

1. *Origin of Educational System.* — Rousseau is the father of modern French education. As is well known, the democratic principles expressed with so much power by this genius were the leaven that permeated the masses and overthrew monarchial institutions in France and even to a considerable extent created the motive power of the American Revolution. The duty of educating man as man, apart from all considerations of social organization, was the thought expressed in the *Émile.* During the nineteenth century we see this principle contending with the demand that education should confirm the existing social organization. We find the one or the other system prevailing as the principles of democracy rose and fell.

In 1791, at the opening of the Revolution, the Constitution provided that "there shall be created

[1] *Teachers College Record*, Vol. 12, p. 60.

and organized a public instruction, common to all citizens, gratuitous as regards those parts of education indispensable to all men." But nothing more was done at the time. The First Republic was so busy fighting for its life that there was no time left for organizing schools.

In 1808 Napoleon founded his Imperial University, a body charged with all the public education of the Empire. In 1815 Napoleon was overthrown, but his system of education was continued. Little was, however, accomplished except that religious organizations were authorized to supply teachers for elementary schools.

With the accession of Louis-Philippe in 1830 the real work of education may be said to have begun. This monarchy depended upon the support of the middle classes, and consequently elementary schools were increased so that in eighteen years, from 1832 to 1850, the registration rose from about two million to nearly three and a half million, and illiteracy was reduced from forty-seven per cent to thirty-five per cent.

2. *Organization of Public Instruction.* — In France, education is divided into four grades, as follows: —

(1) Infant schools for children from two to six years of age.

(2) Primary schools for children from six to fourteen years of age.

(3) Secondary schools for children from eight to twenty years of age.

(4) Universities.

The infant and primary schools constitute elementary education. In 1911 they registered 5,600,000 pupils, or 14.3% of the population. The register of the secondary schools is about 125,000, and of the universities about 41,000. The population of France is 37,000,000.

3. *Vocational Education.* — In addition to the preceding schools, which constitute the national system under the Ministry of Education, France has a vast and complex system of technical and industrial education, partly of private and local origin, but assisted by the State, and controlled by the Ministries of Commerce, Agriculture, etc.

(1) *Elementary.* — Industrial work is given in every elementary school of the country. Since 1882 such exercises have been compulsory. In rural districts and small villages the emphasis is upon agriculture; in other schools, upon manual arts and industries.

In the larger cities workshops are provided in which boys have exercises in wood and metal work. The girls have sewing, lace making, millinery, garment making, cookery, and sometimes silk culture. In other parts of the country constructive work is given in the ordinary classroom. It consists of concrete geometry in connection with arithmetic, clay work, paper folding, cardboard construction, etc. This is just about the sort of construction we have been familiar with in the schools of America during the past decade. In Paris the work in industrial arts is much above the average of the rest of the country. There are in the capital about two hundred shops for woodwork and some sixty for metal work. The theoretical part of this work is taught by regular teachers; but the practice is taught by craftsmen who go from school to school. The exercises are formal, consisting of prescribed models given in logical order for the purpose of teaching sequence of tool processes and manual skills. The ideal is that of formal discipline, which controls also our own scheme of manual training as found in the schools to-day. The teaching of the industrial arts as a preparation for the vocation of the pupil is still unrealized in these schools.

(2) *Practical Continuation Schools of Commerce and Industry.* — France formerly had a system of schools known in that country as "advanced" or "higher" primary, corresponding with the first two years of our high school. These higher primary schools were founded by Guizot during the reign of Louis-Philippe. Guizot's object was to restore the institutions overthrown by the Revolution, not on the democratic basis of the Revolution, nor on the autocratic basis of Napoleon, but on the plutocratic basis. He saw stability for the government in the wealthy middle class. The higher primary schools showed little progress for the first twenty years; but from 1865 to 1872 great improvement was made. In 1880 a law was enacted "for grafting technical instruction upon existing primary schools." [1] The higher primary schools were accordingly consolidated with the elementary schools, and vocational subjects were introduced into the course. Upon graduation from the elementary school at thirteen, which is the limit of the compulsory age, the pupil was admitted to a three-year course in the higher primary. Workshops were provided, and from five to seven and a half hours a day were devoted to manual instruction of a

[1] *Teachers College Record*, Vol. 12, p. 30.

vocational character. In addition to handwork the boys learned drawing, geometry, mechanics, French, history, geography, biology, physics, chemistry, arithmetic, accounts. The girls had the same academic studies, plus domestic economy, sewing, cutting, and fitting.

In 1892 an important departure was taken, when these advanced primary schools were detached from the department of education and placed under the authority of the Minister of Commerce and Industry. Since then the schools have been known as "practical schools of commerce and industry." In taking this step France has followed the well-nigh universal practice of placing vocational schools in charge of separate governing bodies. The most important feature of vocational education is its close relation to industrial needs and standards. The educational authorities in charge of cultural schools are not sufficiently familiar with trade conditions to make vocational schools practical; hence it has been found necessary to provide separate agencies for the control of trade education.

(3) *National Secondary Schools of Arts and Trades.* — Above the Practical Schools of Commerce and Industry are a class of technical high schools known

as National Schools of Arts and Trades. The object of the school is to train leaders for crafts and commerce, foremen for shops, manufacturers versed in the practice of the mechanic arts. The theoretic studies include such subjects as these: algebra, geometry, literature, technology, geography, surveying, physics, chemistry, mechanics, history, commercial law, bookkeeping, electricity. Practical work is carried on in four kinds of shops; namely, the fitting shop, the smithy, the pattern shop, and the foundry.

(4) *Schools of Agriculture.* — France has a more or less rural population. It is a country of small holdings, one person in every four being a small proprietor in some communes. The pick of the village school, therefore, are the sons of the peasants; and these children are all more or less familiar with farm work. The object of the French agricultural school is not so much to teach the practical details of farming as to teach the application of science to agriculture. Agricultural schools are in charge of the Ministry of Agriculture. They are graded as elementary, higher primary, secondary. As to subjects they include plain farming, silkworm culture, fruit culture, the dairy, bird culture, forestry, and veterinary schools.

(5) *Summary.* — From this brief account we see that France has a vast system of elementary education ending at the age of sixteen, which is complete in itself and does not lead to any higher grade of school. The test of its success, according to French ideals, is that it tends to keep children in the professions or occupations of their parents. The object of the educational policy is to " catch those who are inclined to pursue ambitions which they have little chance of satisfying, and put them on the path which leads to contentment. This was most easily achieved by spreading the net of technical education over the primary school." [1] Whatever we may think of the wisdom of this procedure as applicable to white children in our own country, its application to negro education in the South would go far to solve one of the most perplexing of our problems.

[1] Ware, *Educational Foundations of Trade and Industry*, Appleton, 1901, p. 224.

CHAPTER III

INDUSTRIAL *VS.* MANUAL TRAINING

I. A Retrospect. — For a quarter of a century the ideals, purposes, and curricula of the public schools in America have been examined with extreme thoroughness and great earnestness. The outcome of the study has been increased attention to English and nature study and the introduction of manual training. There are thirteen hundred city and town school systems in the United States. Of these about one half are teaching some form of constructive activity. In twelve per cent of the systems hand-work extends through all the grades of the elementary school and in about one hundred cases it extends to the high school. Of the six hundred school systems having manual training, three hundred give less than half an hour a week to it; and only thirty-seven devote as much as half an hour a day to it.

From these statistics it is plain that the great educational value claimed by the early advocates of manual training have not been realized by the

American people. As practiced heretofore, handwork was employed and justified as a means of manumental training, — the development of the mind through motor processes. It was supposed to give a child the use of his hands, to nourish the brain by increasing the circulation in the motor area, to beget reverence for manual industry, and cultivate the moral sense by the habit of accuracy and attention to details. In short, manual training rests upon the theory of formal or general discipline and the personal culture ideal of the great educational reformers, Rousseau, Pestalozzi, Herbart, and Froebel. This theory has recently been sharply questioned, with the result that the superstructure of educational architecture is beginning to totter for want of a firm foundation. The ideal of personal culture is giving way to the demand for efficiency. The difference in point of view is like the ancient controversy between the theologies of St. Paul and St. James. St. Paul's position is that we are justified by faith and saved by grace; but St. James says: "Shew me thy faith without works, and I will shew thee my faith by my works." The manual training advocate is now being challenged to prove his faith by his works. For thirty years he has been taken at

his word. Now the spirit of scientific management demands an accounting. The question it puts to manual training is, " What can you show for the time you have occupied on the school program?"

II. **A Study in Values.** — It is an embarrassing question. So far as I am aware, no scientific study to determine the educational value of manual training has ever been undertaken. The whole case rests upon opinion, assumption, and faith. Dr. Ernest Beckwith Kent [1] has published the results of a study on the " constructive interests of children." This gives us some information as to what value manual training has from the child's point of view.[2] Dr. Kent asked 200 children in the Horace Mann and Ethical Culture Schools to write a list of things they had made spontaneously outside of school during a year. The answers were classified in various ways. The following are some of the facts and conclusions of the investigation: —

1. The articles made fall chiefly under the heads of play imitation, play utility, utility, and useful gifts.

[1] *The Constructive Interests of Children*, by Ernest Beckwith Kent, Ph.D., Teachers College, New York, 1907.

[2] A number of similar studies have been made by others; see *Pedagogical Seminary*, Vol. 6.

2. Play utility is the dominant interest at all the ages tested; namely, from eight to fourteen.

3. Nearly half of a boy's voluntary construction are things used in his play; and one third of such playthings are boats.

4. The doll is the center of practically all of a girl's play construction.

5. The toy is the boy's leading product and the useful gift that of a girl.

6. We have no positive evidence that the school handwork affects a child's general motor control seriously, or even appreciatively.

7. No one has taken the trouble to ascertain whether the best student excels in handwork, or the pupil who is slow at his books.

8. We do not know the economic value of manual work; that is, we do not know whether the adult efficiency of men in any walk of life is affected appreciably by the handwork now found in the schools.

From all this we are obliged to admit that in the matter of manual training we have hitherto walked by faith and not by sight. In the face of the demand for specific vocational training we shall be unable much longer to hold the ground for manual training of the old type.

III. **Changes in Manual Work.** — The generalized exercises which constituted the early form of manual training in this country have been undergoing a gradual change. The boy no longer learns to saw, and plane, and hammer, and chisel; but he employs these processes in the making of some useful article whose value he can appreciate. This transformation has been stimulated by Professor Dewey's vigorous demand that school work shall appeal to the child as being worth while here and now, rather than useful in the dim and distant future. It is true that, from the adult's standpoint, the child is preparing for life; but from his own viewpoint he is already living his life. To the pupil the school *is* life and not a preparation for life. When manual training was first offered as a school study, its friends took pains to disclaim all practical or vocational aims. It was to be a mode of training the mind, and not a means of livelihood. These arguments by slow degrees have been abandoned. The boy no longer makes a mortise-and-tenon joint as an exercise in accuracy and honesty. He makes chairs, desks, tables, coat hangers, flower stands, and a host of other useful articles. The school shop now resembles the abode of the cabinetmaker. Similar changes have oc-

curred in the manual work of girls. Sewing began as an exercise in learning certain stitches for patching and garment making. The material employed consisted of remnants only. At present our girls make real garments, first for dolls, later for themselves. Thirty thousand dresses were made last year by the girls in the New York public schools. Cooking has always been more practical than other manual work of the schools. The change in this case is from the mere laboratory demonstration by the teacher to individual equipment and cooking by the girl herself. Numerous activities involved in housekeeping and home making have been added to the course, so that we no longer speak of the activities of the school kitchen as mere cooking, but call it domestic science, domestic art, or household arts. Similar modifications have been made in oak-tag construction, raffia, and cord work. The value of manual work in paper has always been, in my judgment, doubtful. It involves fine measurements, which are difficult for small children; it consumes a great deal of time; it fails to exercise the inventive faculty; and it results in a product that has only play utility at best, and little of that, on account of the long and painful process of construction. But with all these

improvements, we have by no means answered the important question: —

IV. **The Place of Industries in Public Education.** — Granted that manual training as practiced in the recent past was a mistake, and that the value of the present constructive exercises is problematical, what form of manual work or industrial work is desirable and possible in the several grades? This problem was set by the National Education Association for a special committee of its body, which reported in July, 1910.[1] The chairman of the committee was Mr. Jesse D. Burks, and the secretary was Mr. Charles R. Richards. The report is divided into three major parts as follows: (*a*) Industries in the Elementary School; (*b*) Intermediate Industrial Schools; (*c*) Technical Education in High Schools.

1. *Industries in the Elementary School.* — (1) *The Primary Grades.* — All modern psychologists agree that the constructive interest of children is one of the strongest of impulses. An appeal to this motive constitutes one of the most effective means of arousing interest in any subject. Professor Dewey believes that the entire course of study should be

[1] *Report of the Committee on the Place of Industries in Public Education*, N. E. A., Winona, Minn., 1910.

evolved out of constructive processes. From this point of view manual work is not a subject, but is the very core of the curriculum, giving life and value to all subjects. It has further significance as an application of the principle that learning should be by doing, and as an application of what is learned to life situations. Speaking of the two famous pillars in the Piazzetta of Venice, Ruskin says: "You must find time for a little practical cutting of capitals yourself, before you will discern the beauty of these. There is nothing like a little work with the fingers for teaching the eyes."[1] The late Colonel Parker classified all educative activities as *attention*, *judgment*, and *expression*. Construction he treated as one of the nine modes of expression.

The same analysis that has been made of the psychological need for constructive work applies to the study of industry. Industries represent that phase of life in which construction finds its principal use. The committee hopes that constructive work and the study of industry in the elementary school will in future be of such a character as to enable the pupil to make a wise choice of a vocation. At its meeting in Chicago in 1912, the National Education

[1] *St. Mark's Rest*, by John Ruskin, Merrill and Batzer, New York, p. 15.

Association adopted the following resolution, which embodies this same idea:

"RESOLVED, That the courses of study in our elementary schools should be so enriched as to make it possible to discern the tastes, tendencies, and abilities of the child previous to the time when vocational decisions are to be made."

According to the last *United States Census Report* the principal industries with the number of male employees are as follows:—

GROUP	TRADE	NUMBER OF MALES EMPLOYED
I. Building trades	Carpentry	600,000
	Woodworking	350,000
	Masonry, stoneworking, and concrete construction	220,000
	Painting and glazing	270,000
	Plumbing and pipe fitting	100,000
II. Metal and machine trades	Structural iron work	100,000
	Foundry work	100,000
	Machine-shop work	280,000
	Blacksmithing	220,000
	Engineers and firemen	400,000
III. Machine-operating trades	Weaving of textiles	250,000
	Clothing manufacture	170,000
	Shoemaking and leather work	200,000
	Other metal working	80,000
IV. Electrical work		100,000
V. Printing		140,000
VI. Agriculture		9,000,000
VII. Mining		500,000

There are, of course, many subdivisions of each of these industries which give rise to additional trades. What particular trades shall be studied and taught



Bookbinding Shop of the Printing Department, Vocational School for Boys, New York.

in a given community will depend upon the prevailing occupations of the place. Some of the concrete suggestions of the committee are given below: —

(1) An example of the study of the textile industry, second year, Horace Mann School, New York.

(2) An example of candle making, third year, Francis W. Parker School, Chicago.

(3) Study of a local dairy, fourth grade; lumber industry, fifth grade; Teachers College, University of Missouri.

(4) Garden work, Francis W. Parker School, Chicago, first three years.

(5) Study of transportation, third grade, Francis W. Parker School, Chicago.

(2) *The Grammar Grades.* — Among the suggestions offered by the committee are these: —

(*a*) Study of ceramic industries, from a course of study in Manual Training, by C. L. Boone, *Manual Training Magazine*, December, 1908, and February, 1909.

(*b*) Study of a machine shop, sixth grade, Horace Mann School, New York.

(*c*) Study of printing, from "A School Print Shop," by L. W. Wahlstrom, *Manual Training Magazine*, December, 1908.

(*d*) Study of a foundry, from "Industrial Studies in Manual Training," by E. E. MacNary, *Proceedings*, Eastern Manual Training Association, 1909.

(3) *Special Industrial Classes.* — In several places special industrial classes have been authorized for the purpose of trying out such suggestions as have been made with reference to vocational work. Thus, the Boston School Committee, on May 6, 1907, passed the following order: "That the Superintendent be authorized to designate one or more boys' elementary schools in which the course of study may be experimentally modified for the purpose of determining in what way these schools may become more effective in training pupils for industrial pursuits, while at the same time maintaining their efficiency for preparation for high schools."

The Jamaica Plain School

In accordance with this authority the Superintendent selected the Agassiz School of Jamaica Plain. The experiment has been going on for about seven years. The nature of the departure is as follows: —

There are classes in the sixth grade giving five hours a week to manual training and drawing with-

out losing academic rank. The classes are general industrial or work classes. The product which they turn out is such as can be utilized by the school supply department.

There are also classes made up of boys and girls fourteen years of age or over, selected from the lower grades. These have drawing and construction work for periods varying from ten to twenty hours a week, plus arithmetic, language, and other academic work. The manual exercises consist of wood-working, cabinet-making, metal-work, sheet-metal work, book-binding, and printing.

There are classes open to graduates of the elementary school similar to those just described.

Finally, there are classes in high schools where pupils take academic studies along with an intensive study of some industry, like jewelry.

(4) *A Study of Elimination.* — Professor Edward L. Thorndike has made a study of pupil elimination in twenty-three cities and thirty-four colleges which shows some startling results.[1] From this investigation it appears that of 100 pupils who enter an elementary school, 4 leave before reaching the fourth grade; 9 leave in the fourth grade; 13 leave in the

[1] *Bulletin No. 4*, 1907, U. S. Bureau of Education.

fifth grade; 14 leave in the sixth grade; 14 leave in the seventh grade; 13 leave in the eighth grade.

That is to say, two-thirds drop out by the way and one-third remain to complete the course.

The amount of elimination based upon the registration of the several grades is as follows: —

Grade 4 = 10 % Grade 6 = 20.6 %
Grade 5 = 16 % Grade 7 = 26 %
Grade 8 = 32.5 %

First Year in High School = 37 %
Second Year in High School = 29.4 %
Third Year in High School = 33.3 %

First Year in College = 22 %
Second Year in College = 11 %
Third Year in College = 5 %

Only about a third of all the children graduate from the elementary school, less than 10 % graduate from the high school, and less than 5 % graduate from a college.

The significance of these statistics may be more vividly realized by stating the facts in another way. For instance, " if the school children in this country under eighteen years of age were placed in a

straight line, allowing one foot of space for each child, the line would stretch from the upper end of Maine across the continent to the lower end of California. If those leaving school at or about the age of fourteen — nearly all of them to become bread-winners — were taken from the line, only that portion extending across the state of California would remain."[1]

Up to the age of thirteen, the amount of elimination in the United States is about the same as in Germany, France, and England; but the United States is far more successful than the other countries named in retaining children after thirteen for a much longer and more extensive schooling.

There is great variability among cities in the amount of elimination. The percentage of children entering school who continue to the eighth grade ranges from 14.4 in Baltimore to 72 in Worcester. New York's percentage in Thorndike's table is 33.7; Malden's, 76.5; Springfield's, 53.4; Newark's, 25. The range of children who remain to graduate from the high school is from 2.3 % in Baltimore to 26.4 % in Worcester. Thorndike is of the opinion that the

[1] Professor Herman Schneider in *The Annals of the American Academy of Political and Social Science*, Philadelphia, Vol. 33, No. 1, p. 50.

superiority of one city over another in the retention of pupils is apparently caused far more by the nature of the population than by the character and administration of the schools.[1]

Still, it is assumed that one important cause of elimination is incapacity for work, and lack of interest in the kind of work required by the present course of study. For this reason there has been a more or less general demand for an " intermediate " school, which shall offer vocational training for the large numbers who from choice or necessity now drop out of the grades.

[1] The accuracy of Dr. Thorndike's figures on elimination has been seriously questioned by Dr. Ayres, who finds that the "general tendency of American school systems is to carry all of the children through the fifth grade, half of them to the final elementary grade, and one in ten to the final year of the high school." — *Laggards in Our Schools*, by Leonard P. Ayres, Charities Publication Committee, New York, 1909, pp. 65–72.

CHAPTER IV

THE INTERMEDIATE SCHOOL

I. Differentiated Programs of Study for the Last Two Years of the Elementary School. — The wisdom of giving all children in the elementary school the same training for the entire eight years of the course is now being questioned. Equal opportunity for all does not necessarily mean the same form of education for all. The European practice of promoting class distinctions by a system of fees and a sharp differentiation of curricula at the end of the fourth school year, is manifestly not in conformity with the expressed principles of American democracy. But a choice of courses at the end of the sixth school year, free to all alike, is not a denial of equal educational opportunity. On the contrary, it is creating a diversity of opportunity, whereby different types and degrees of talent may find fitting modes of expression and development, instead of being confined to a single form of training. In order to bring about the proposed reform it would

be necessary to establish an intermediate school, covering the seventh and eighth years of the elementary school, and possibly the first and second years of the high school. This would provide a varied program of cultural and vocational studies so combined that the pupil could prepare either for the high school or for some vocational employment. It would also provide opportunity for two years of study beyond the elementary school, and would thus absorb that large body of pupils who now go for a year or two to high school and then drop out, either for want of interest in study or from economic necessity.[1] The high schools would then be relieved of the vast numbers that crowd the entering classes and go no further. The intermediate school would be better adapted to their needs than the first and second years of high school; for these courses are merely a preparation for what is to follow, whereas the intermediate courses might possess more or less independent value, in addition to their preparatory function for further study.

[1] During the school year ending June 30, 1913, the "net enrollment" of the high schools in New York City was 61,262. There were discharged during the same year 20,326 pupils who had not completed the course. These were distributed as follows: first year, 12,535; second year, 4963; third year, 1929; fourth year, 899.

The course of study of the intermediate school might contain four groups of options, as follows: [1] —

1. *The Commercial Course* for those who expect to take the commercial course in the high school or who intend to go to work in business houses: —

(*a*) 12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history, and science.

(*b*) 7½ hours to physical training, music, general exercises, and recesses.

(*c*) 5 hours to bookkeeping, business forms and procedure, business arithmetic, and related design.

(*d*) 5 hours to typewriting and hand-work.

(*e*) Total, 30 hours per week.

2. *The Literary Course* for those who intend to go through the high school and to college: —

(*a*) 12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history, and science.

(*b*) 7½ hours to physical training, music, general exercises, and recesses.

(*c*) 5 hours to a modern language.

(*d*) 5 hours to drawing, designing, making, and repairing.

[1] See article by David Snedden, *Educational Review*, Vol. 44, p. 134.

(*e*) Total, 30 hours per week.

3. *The Manual Arts Course* for those who intend to enter the industrial or the general course in the high school or to enter upon a trade: —

(*a*) 12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history, and science.

(*b*) 7½ hours to physical training, music, general exercises, and recesses.

(*c*) 5 hours to bookkeeping, business forms and procedure, business arithmetic, and related design.

(*d*) 5 hours to typewriting and hand-work.

(*e*) Total, 30 hours per week.

4. *The Household Arts Course* for girls who wish to devote a large amount of time to the arts of home making.

(*a*) 12½ hours to literature, composition, spelling, penmanship, mathematics, geography, history, and science.

(*b*) 7½ hours to physical training, music, general exercises, and recesses.

(*c*) 10 hours to household arts.

(*d*) Total, 30 hours per week.

1. *The Fitchburg School.* — Such a school is already in existence in Fitchburg, Massachusetts. It is

attended by about one-third of the seventh and eighth grade pupils in the city. Some of the forms of handwork for boys undertaken in the Fitchburg school under course (3) are as follows:[1] —

(*a*) In the line of repairs: repacking faucets in the building, scraping and refinishing desks, setting glass, care of lawn-mowers, painting window screens, relaying decayed basement floors, repairing broken furniture, reseating chairs, rearranging rubber stair pads.

(*b*) In the line of woodwork: constructing work-benches, assisting in making kitchen tables, making teachers' desks for the entire building, building partitions and lockers.

(*c*) In the painting line: bronzing steam pipes, oiling floors, finishing and seating chairs bought in unfinished wood, painting kitchen, dining-room, wood-working room, and locker rooms, finishing work-benches and teachers' desks, painting and papering library.

(*d*) Work was begun in grading and the laying of concrete and granolithic walks.

In all the above lines of work the pupils are directed not only by the teachers, but by skilled

[1] *Vocational Education*, Vol. 2, p. 63.

journeymen, also, who work with them. It is insisted that the work be performed with dispatch and in a workmanlike manner. That is, an effort is made to provide the actual conditions and atmosphere of industry.

The girls who take the domestic arts course design and make their own needlebooks, work bags, gymnasium suits, caps and aprons for cooking, besides hemming towels for the kitchen and making covers for the typewriters.

It is proposed that retarded children between the ages of twelve and fourteen years of age, who have not yet reached the sixth grade, shall attend the intermediate school, taking the practical courses with the rest and pursuing the cultural studies in special classes. It is well known that the truant is frequently a retarded pupil. He loses interest in school because his classmates are younger than he and the studies of the grade do not appeal to him. A thirteen-year-old boy in a 3A class with nine-year-old pupils can hardly be blamed for considering both the studies and the companions unworthy of serious attention. Besides, he is liable to become the butt of jests from unsympathetic teachers. The whole school environment is odious to him, and

so he "goes on the hook." Then he becomes a conscious lawbreaker; consorts with evil companions who are older and sometimes skilled in crime; and frequently lands in the Children's Court charged with larceny or other juvenile delinquency. Unquestionably these older children should be segregated and given work to do that is worth while from their own point of view. The intermediate school with an optional program is the very place for a misfit boy. Handwork is always attractive to children who hate books; and the muscular exercise required for handwork absorbs energy that is now expended in vagrancy.

2. *The Cleveland School.* — Fitchburg is not the only place that possesses an intermediate school. The Elementary Industrial School at Cleveland is another example. The requirements for admission to this school are that pupils "shall be at least two years behind grade, that they should either have finished the sixth grade or have failed to finish it and would therefore become 'repeaters.'" The academic instruction includes English, arithmetic, geography, history, and hygiene, all taught in such a way that through narrowing the field and intensifying instruction the pupils may "secure insight

into and control of a few important and fundamental things." On the practical side the boys have shopwork in wood and sheet metal, mechanical drawing, freehand drawing, and design. The girls have household arts, including cooking, machine and hand sewing, garment making, freehand and mechanical drawing, and design applied to various crafts. About half the day is spent in book work, the other half in shopwork. The school aims "to offer substantial book training with selected subject matter based upon the immediate needs of retarded pupils, coupled with a training in the practical arts that underlie industry. It seeks primarily to develop intelligence, yet at the same time endeavors to give skill in work." [1]

3. *The Albany and Rochester Schools.* — The Cleveland school exists for retarded pupils only. But similar courses for normal pupils have been devised at the Intermediate Industrial School of Albany, New York, and at the Rochester Shop Schools. In the former the plan is to take "two years of the elementary period and two years beyond, children entering at about thirteen or fourteen." In the latter, the plan is to receive "boys

[1] *Superintendent's Report*, 1909, p. 61.

from fourteen years of age who were in the sixth, seventh, and eighth grades, and who were manifestly of a mechanical turn of mind. . . . The weekly program is evenly divided between shop and academic work, ... but almost all the academic work is based on industrial conditions or needs." The curriculum of the school covers elementary and advanced woodworking and elementary and advanced machine and electrical work.[1]

4. *Other Similar Schools* already in existence may be enumerated as follows: —

(*a*) The Hebrew Technical Institute, New York.

(*b*) The Manhattan Trade School for Girls, New York.

(*c*) The Vocational School for Boys, New York.

(*d*) Industrial School, New Bedford, Massachusetts.

The National Society for the Promotion of Industrial Education has published a descriptive list of 159 trade and industrial schools in the United States.[2] Many of these are properly intermediate

[1] *Proceedings*, N. E. A., 1910, p. 730.

[2] *Bulletin No. 11*, by Edward H. Reisner, National Society for the Promotion of Industrial Education, 140 West 42d St., New York.

schools, though they are not known as such. A few years ago the State of New York established a Bureau of Vocational Education under the direction of the Commissioner of Education. Mr. Arthur D. Dean was placed in charge of the Bureau. At the dedication of the new Education Building at Albany, on October 15, 1912, the late Hon. Whitelaw Reid, Ambassador to Great Britain and Chancellor of the University of the State of New York, presented the following summary of the progress of vocational teaching in the State of New York: —

"All public schools, whether in cities, villages, or rural districts, teach drawing. Three-fourths of the city schools offer courses in manual training, cooking, and sewing. One-half of the village schools give courses in sewing, one-third manual training and cooking. There are forty public industrial and trade schools, with a day enrollment of 4000 and an evening enrollment of 3000 pupils. Twenty-eight village high schools have vocational courses in agriculture, and twenty others give agricultural teaching of a less definite character. There are 10,000 pupils in evening departments of existing day schools, learning the trade appplications of drawing, science, and mathematics."

II. Industries in the High School. — The U. S. Commissioner of Education[1] reports 425 public high

[1] *Report*, 1911, Vol. 2, p. 1229.

schools, representing nearly all the States, in which manual or technical training is given to 27,178 boys, 15,948 girls, — a total of 43,126 students. He reports also 287 manual, industrial, and technical schools, in which 17,907 pupils receive instruction in elementary academic studies, 61,296 pupils receive instruction in ordinary high school studies, and 108,209 pupils receive manual and industrial training. The typical manual training high school is a school of secondary grade in which a greater or less amount of handwork is included in the curriculum and in which the greater part of the academic instruction is similar to that found in other high schools. Neither the manual nor the academic instruction is especially planned to be of direct vocational service. The *technical high school* is a school of secondary grade having the distinct purpose of preparing its pupils for industrial leadership. In such schools the instruction deals not only with the important manual operations, but also with those principles of science and mathematics, and their direct applications to industrial work, which will prepare the student for mastering the fundamental processes and problems of the industries. In secondary, as well as in elementary, education, manual

training as hitherto taught has not proved its value by its work. The N. E. A. Committee,[1] after thorough investigation, says that, with a few notable exceptions, practically all of the 425 public industrial and technical high schools should be classified as manual training high schools. They differ in no important educational particular from regular academic high schools. Very few of their graduates are directed toward industrial life and fitted for any specific science. "The committee has obtained from a great variety of sources what appears to it almost overwhelming evidence of the . . . imperative need of both secondary technical schools and trade and preparatory trade schools, if all of the youth of the land are to be served with anything approaching equal educational opportunities." These technical high schools should prepare pupils definitely for industrial efficiency. The opinion that the scope and purpose of the manual training high school should be changed, is not confined to men directly interested in the technical side of education, as is evident from the following excerpt of a letter from Dr. Thomas M. Balliet, of New York University: —

[1] *The Place of Industries in Public Education*, N. E. A., 1910, p. 81.

"As for a manual-training high school, which differs only from the literary commercial high schools in that it has somewhat more shopwork and perhaps more mechanical drawing and a literary course less extensive than the first, and perhaps a less specialized literary course than the second, I confess I see no use for it in the future. It has no distinctive aim and character. In such a school there is so great a lack of correlation between the academic studies and the shopwork that boys and girls recite together in their academic work and separately only in their strictly technical work. Such a school is simply a literary high school with a somewhat narrow academic course and with a little more shopwork. The problem before us is to transform all such manual-training high schools into technical high schools. The manual training of a technical high school is likely to be fully as good, and I should say, better, than the manual training in a so-called manual-training high school of the type here described. Manual training does not lose its general educational value, but distinctly gains by being given a more definite industrial bent than it has had in the past." [1]

In New York City thirty-seven per cent of the population are engaged in industrial and mechanical work; thirty-seven per cent in business; nineteen per cent in domestic service; and five per cent in the learned professions. We have many schools to prepare for the professions, but we have, aside from engineering schools of college grade, only a few

[1] *The Place of Industries in Public Education*, N. E. A., 1910, p. 92.

schools giving thorough vocational training for the seventy-four per cent engaged in commerce and industry. The result is that our skilled artisans are nearly all foreign-born and foreign-trained. Our boys and girls drift into offices and stores as messengers and low-grade helpers. Many of them fail to find congenial and remunerative employment, and soon join the ranks of criminals. Statistics show that most of the crime in New York is committed by young men. The Massachusetts Commission discovered that 25,000 children from fourteen to sixteen years of age, in that state alone, are out of school and unemployed. Common observation is enough to verify the inference that similar conditions exist in other states. The corner loafer and the criminal gangster are evidences of the evil of youthful idleness. If all young people were trained for some specific vocation, as is the case, for example, in Wurttemberg, where education is compulsory up to the age of eighteen, these idlers that now infest our streets and prey upon honest people would be employed at some useful occupation. From the point of view of the individual and of society, vocational education, extension of the compulsory period, and the more thorough enforce-



Beginners' Class in Electric Wiring, Vocational School for Boys, New York.

ment of compulsory laws are the pressing need of the hour.

1. *Adjustment of the High School to the Needs of the Community.* — What can be done in the direction of making the high school useful to the community which supports it may be shown by citing a concrete example. Colebrook Academy [1] is located in the Connecticut Valley in the northern part of New Hampshire. The population of the town is 1200, and the surrounding country is a fine agricultural district. This Academy was once a private school. While retaining its original name, it is really a public high school. In an effort to relate the school program as closely as possible to the life and industries of the community, four distinct lines of work are offered; namely: —

(*a*) The ordinary literary course leading to the college.

(*b*) A course in agriculture.

(*c*) A course in home making.

(*d*) A commercial course.

The faculty consists of a superintendent, who supervises the district and does no teaching; the

[1] *The Readjustment of a Rural High School to the Needs of the Community*, by H. A. Brown, *Bulletin No. 20*, 1912, U. S. Bureau of Education.

principal and two teachers, who are college graduates, and teach the academic subjects; a teacher of agriculture, who is a graduate of the Massachusetts Agricultural College; a domestic arts teacher, who is a graduate of the home economics department of Simmons College; and a teacher of commercial subjects, who is a graduate of the commercial course of the Salem State Normal School.

The equipment includes the usual building and supplies of a literary high school, besides a greenhouse, dairy laboratory, kitchen, carpenter shop, blacksmith shop, and school garden.

The course of study in detail follows: —

COURSE OF STUDY OF A RURAL HIGH SCHOOL, COLEBROOK, N.H.

YEAR	SUBJECTS	PERIODS PER WEEK	EXT. IN YEARS
	Agricultural Course		
I	English	5	1
	Advanced Arithmetic	5	1
	Agronomy	5	1
	Farm mechanics — Farm carpentry	10	1
II	English	5	1
	Practical mathematics	5	1
	Animal husbandry and dairying	5	1
	Farm mechanics — Farm blacksmithing	10	1
III	English	5	1
	Physics	5	1
	Horticulture	5	1
	Road building	5	½
	Forestry	5	½
IV	English	4	1
	American constitutional history	4	1

COURSE OF STUDY OF A RURAL HIGH SCHOOL, COLEBROOK, N.H.
(*Continued*)

YEAR	SUBJECTS	PERIODS PER WEEK	EXT. IN YEARS
	Chemistry	4	1
	Rural economy and farm management	4	1
	Physiography: Geology and mineralogy	4	1
	Domestic Arts Course		
I	English	5	1
	Advanced arithmetic	5	1
	Elementary sewing	10	½
	Elementary cooking	10	½
	Ancient history	5	1
II	English	5	1
	Dressmaking, millinery, and designing	10	1
	Biology	5	1
	French	5	1
III	English	5	1
	Household design and decoration	5	½
	Household mechanical appliances	5	¼
	Household sanitation and hygiene	5	¼
	Physics	5	1
	French	5	1
IV	English	4	1
	American constitutional history	4	1
	Chemistry	4	1
	Advanced cooking and dietaries	4	½
	Advanced physiology and hygiene and the elements of nursing	4	¼
	Household economics	4	¼
	French	4	1
	Commercial Course		
I	English	5	1
	Commercial arithmetic	5	1
	Stenography	5	1
	Typewriting	5	1
	Ancient history	5	1
II	English	5	1
	Stenography	5	1
	Typewriting	5	1
	Commercial geography	5	½
	History of commerce	5	½
	French	5	1

COURSE OF STUDY OF A RURAL HIGH SCHOOL, COLEBROOK, N.H.
(*Continued*)

YEAR	SUBJECTS	PERIODS PER WEEK	EXT. IN YEARS
III	English	5	1
	Bookkeeping and office practice	5	1
	Physics	5	1
	French	5	1
IV	English	4	1
	American constitutional history	4	1
	Commercial law	4	½
	Political economy	4	½
	Bookkeeping and office practice	4	1
	French	4	1
	Classical Course		
I	English	5	1
	Ancient history	5	1
	First year mathematics	5	1
	Latin	5	1
II	English	5	1
	Second year mathematics	5	1
	French	5	1
	Latin	5	1
III	English	5	1
	French	5	1
	Latin	5	1
	Physics and chemistry	5	1
IV	English	4	1
	American constitutional history	4	1
	French	4	1
	Latin	4	1
	Review algebra	4	½
	Review geometry	4	½

CHAPTER V

CONTINUATION SCHOOLS

I. The Shop *vs.* the Trade School. — Whether the trade school or the shop is the best place to learn a trade is an open question. We have the word of Dr. Kerschensteiner that "a shop or factory cannot produce a good mechanic. Nearly all of them lack sufficient variety in scope or range and quality of work to enable them to do so. Furthermore, many of them are not prepared to impart to their apprentices what they know themselves." [1] A similar opinion is expressed by Mr. Alexander, of the General Electric Company, West Lynn, Massachusetts. Speaking of the apprenticeship system in connection with so-called "corporation schools," he says: "We should welcome the development of this phase of industrial education, but with a jealous eye should watch its progress, and courageously voice our protest, if it tends to gravitate toward narrow

[1] *The Organization and Management of Trade Schools*, by John M. Shrigley, National Society for the Promotion of Industrial Education, 1908.

selfishness instead of legitimate protection of the industries," or offers "merely a surface polish of trade training rather than a thorough treatment of the whole problem." [1] That is, the corporation is likely to train its employees to become expert in some one process of a trade or in the handling of a single piece of machinery; but it cannot be expected to care very much about the personal development of the worker from the humanitarian or social point of view, or to be interested in teaching him the whole trade merely for his own good. It is in the educational business simply because it pays to have men and women properly trained to carry on the business.

On the other hand, it is contended by some that the place to learn a trade is in the trade itself; because the school cannot provide the conditions of industry. Thus, Mr. F. W. Thomas, Supervisor of Apprentices of the Santa Fé Railway System, says: "There is nothing that will ever take the place of an apprenticeship. There is no trade school or training school in the country that will turn out young men or boys who are capable of entering a

[1] *Bulletin No. 13, Part II*, National Society for the Promotion of Industrial Education, 1911, p. 54.

shop and competing with the average mechanic; while they may be taught considerable 'book-learning,' their practical instruction must of necessity be limited. There is nothing that will take the place of practical experience." [1] That there is truth in this statement is obvious when you apply it to the teaching profession. The normal school and the training school are very useful in their way, but they cannot produce the finished teacher. They have their model and observation schools, where the candidate tries his hand at teaching. But conditions under which he works are artificial and not at all like those of a real school. The very best graduates of a training school are not able in the beginning to compete on equal terms with the experienced members of their profession. They begin with the lowest salary and require much assistance from the principal. Not until they have had five or six years of experience can they hope to become artists.

II. **The Continuation School.** — Since then the corporation or shop is not equipped for teaching and has more interest in the welfare of the business

[1] *Bulletin No. 13, Part II*, National Society for the Promotion of Industrial Education, 1911, p. 67.

than the welfare of the apprentice; and since the trade school is relatively inefficient on account of its artificial environment, a third mode of training apprentices has been devised which possesses the advantages of both the preceding plans and avoids all their disadvantages. This is the so-called continuation school, or part-time system, by which the learner is employed in the trade at regular wages, but is permitted or required to attend a trade school for a certain stipulated number of hours per week in the daytime. In this way the pupil has real shop experience and at the same time gets the benefit of the broader theoretical training which aims to make him an efficient worker and a good citizen. The plan has the additional merit of making the apprentice self-supporting while he is learning his trade. If he devotes all his time to school, he is an economic burden to his family. If he devotes all his time to the trade, his broader intellectual and civic training is liable to be neglected. Here we have, therefore, the ideal arrangement for the most efficient and most economical production of skilled artisans.

A continuation school is a school for persons engaged in useful employment which gives instruction

supplementary to such employment. In this country we find three types of this institution: —

1. Schools for profit, examples of which are correspondence schools, commercial schools, and some trade schools.

2. Endowed schools, examples of which are Cooper Union, the Ohio Mechanics' Institute, Pratt Institute, the Ranken School of Mechanical Trades in St. Louis, and the Williamson School in Pennsylvania.

3. Public schools.

III. **The Part-time System in Cincinnati.** — 1. *The Engineering College.*[1] — In 1906 Professor Herman Schneider, Dean of the College of Engineering, University of Cincinnati, introduced his well-known plan of coöperative education. The University belongs to the city and is entirely supported by taxation. The course of study is so devised that the student works alternate weeks in the college and at the manufacturing shops of the city. The classes are divided into two sections, so that when one section is at the shop, the other is at the university. The length of the course is six years. During the summer

[1] *Annals of the American Academy of Political and Social Science*, Vol. 33, p. 50.

the student works at the shop all the time, with the exception of a few weeks' vacation. He is paid for his shop work on a scale of wages which begins at ten cents an hour and increases at the rate of one cent an hour every six months, so that the total earnings of the course amount to about $1800. The first year there were sixty applicants. Of these forty-five went to the shops, of whom twenty-eight survived. The second year there were eight hundred applicants, sixty of whom were sent to the shops. Of the sixty, forty-four were recommended by their employers and started university work. The third year the applications numbered two thousand.

2. *Part-time in High Schools.* — The secondary schools of Cincinnati are also operating the part-time system. In 1907 the Board of Education began the erection of two large high schools costing nearly a million dollars each. The schools offer the usual academic studies and, in addition, vocational training for boys and girls. The first two years of vocational study are designed to discover aptitudes and to give general manual dexterity. Then the pupil is placed into a trade shop, and is required to continue his schooling on the alternate week plan for the next two years. If the economic necessity of the

pupil requires it, his schooling may be limited to half a day per week. In the first school year the boy gives three or four hours a day to wood work. In the second year he gives the same time to mental work. At the beginning of the third year he selects his vocation and enters a shop on the wages of a third-year apprentice. The school is open at night for adult workers. In 1911 the evening classes enrolled 2400 pupils.

3. *The Continuation School for Apprentices.* — The school authorities invited the apprentices in the shops to continue their education in the evening classes of the high schools. But it was soon discovered that the training of the apprentice is distinctly a daytime proposition. A boy who has concentrated his attention upon a machine or process for ten hours during the day has little energy left for serious work at night. Hence his education must be given, not in addition to his work, but in lieu of a part of his work. The Board of Education therefore opened a Continuation School for apprentices in 1909. It runs forty-eight weeks a year, eight hours a day, four and a half days a week. The teachers spend two half days a week studying the conditions under which their pupils work, con-

sulting foremen about the needs of the boys, and getting ideas as to the matter and method of teaching. There are 250 students, divided into nine groups according to proficiency. They attend one half day (four hours) a week. At first they were docked for this absence from the shop; but several years ago the manufacturers' organization, the labor organization, and the school authorities decided to shorten the hours of labor without decreasing pay. Consequently the boy attends school for half a day and still receives a full week's pay. The apprentices at present in the continuation school are from the machine trade, pattern making, drafting, and printing. The wages of the boys for the half day during which they are absent from the shop to attend school amounts to $6000 a year. The loss in production suffered by the firms is over $25,000 a year. The Board of Education spends $5000 a year to maintain the school. The burden placed on the teachers thus amounts to $36,000 a year. They must produce an attitude of mind and an increase of skill and intelligence on the part of the boys which will produce $31,000 worth of work in the shorter week beyond what they would produce in a full week without going to school.

"The manner in which the attitude of the apprentice has been influenced and his intelligence increased, so that there has been no loss charged up to the shorter week, is most interesting and is the subject of comment in labor circles as well as educational and commercial organizations.

"The first thing an apprentice is taught is the difference between knowledge and skill. The average school lad has been led along the paths of knowledge until he has begun to believe that knowledge is money. He must be taught that few, if any, persons are able to derive an income from the sale of their knowledge and that knowledge is only saleable when it has been worked into skill. Knowledge is knowing how to do a thing. Skill is ability to do it with such a quality and in such a quantity that it is marketable. The purpose of manufacture is not to make things, but to make things that will sell and to make them for considerably less than they will sell for. The apprentice is usually offended at this commercialism, and it takes him some time to enter into the spirit of modern production. He wishes to learn how to do a multitude of things, but he scorns the drudgery of repeating any one thing until he has mastered it. The most vital part of apprenticeship is lost to the boy if he finishes his time with barrels of knowledge but without the skill to produce a day's work." [1]

As a result of the success of the school, the Ohio Legislature passed a law in 1910 authorizing boards of education to establish continuation schools, and

[1] J. Howard Renshaw, Principal of the Continuation School, Cincinnati, *Bulletin No. 15*, National Society for the Promotion of Industrial Education, 1911, p. 82.

requiring the attendance of all children employed under sixteen years of age, for not more than eight hours a week.

IV. **The Laws of Massachusetts and Connecticut.** — The Legislatures of Massachusetts and Connecticut have passed laws authorizing the establishment and maintenance of three types of vocation schools: —

(1) All-day schools for children over fourteen years of age who are not engaged in any wage-earning occupation.

(2) Part-time classes for children between the ages of fourteen and eighteen who are employed in some industry during the remainder of the day or week.

(3) Evening courses for adults employed in trades.

1. *The Newton Independent Industrial School.* — Of the first type the Independent Industrial School of Newton, Massachusetts,[1] is an illustration. It receives boys from the elementary school who are 14 years of age. In June, 1911, the Industrial School had eighty-three pupils on register. Of these nine had come from the fifth grade, twenty-one from the sixth grade, twenty-five from the seventh grade, and

[1] *Vocational Education*, Vol. 1, p. 244.

twenty-two from the eighth grade. It appears from the previous education of these boys that many of them were " retarded " in the regular school. They evidently had no taste for the kind of instruction that is given by the traditional public school. For this reason the Massachusetts law requires that all-day vocational schools shall be " separate," shall be free from the domination of cultural ideals, and governed definitely by the vocational interests of the pupils. The Newton School emphasizes the idea of separateness by calling itself an Independent Industrial School. It is independent of the regular elementary school and all its ways and works. But in the opinion of those best qualified to judge, this feature of the Massachusetts law is an error. There is no valid reason why a child who dislikes books should be compelled to defer his vocational training until he is fourteen. Nor is there any good reason why the public school should refuse to provide vocational training for those of its pupils who desire it and at the same time keep open the way to the high school for those who are headed that way. Reform schools, organized on a vocational plan, often receive boys only ten years of age, and succeed where the public school has failed. The Newton

School is open six hours a day and eleven months in the year. The course covers three years, and the pupil's time is divided equally between book work and shop work. The course of study includes the following: —

(*a*) Mechanical drawing; (*b*) Mathematics; (*c*) English; (*d*) Commercial geography; (*e*) Science; (*f*) History; (*g*) Government; (*h*) Shop work.

The school is committed to the policy of turning out of its shop a marketable product. Much of the school's equipment was manufactured by the pupils. A variety of articles, such as cabinets, tables, blanks, catalogues, reports, etc., for use in other schools, have been turned out of the shops of the school. An accurate account of the cash value of the product is kept and is credited to the school.

It is claimed by the school authorities that the complete four years' course (three in the school and one in the trade) will give the boy the essentials of the seventh and eighth grade work and of the first two years of the high school course, and, in addition, a trade experience fully equivalent to two years of apprenticeship training.

2. *The Fitchburg High School.* — The part-time plan of the Fitchburg (Mass.) High School illustrates

the second type of schools authorized by the Massachusetts law. The pupils give half the time to work for wages in the industrial shops of the city, and half to school work. The classroom instruction articulates with the grammar school below and the college or technical school above. The regular high school building is used for this part of the course. The first year the boy devotes his entire time to school. The next three years equal groups of boys alternate between shop and school, so that half the pupils are always at work in the shop and half in school. Boys are paid for work done in the shops at the rate of ten cents an hour for the first year, eleven cents for the second year, and twelve and a half cents for the third year. This makes a total income of $552.75 for three years.

3. *The Springfield Evening School for Trades* illustrates the third type of schools contemplated by the Massachusetts law. It is the outcome of the Mechanic Arts High School, established in 1898, under the superintendency of Thomas M. Balliet, which was the first trade school in the United States supported at public expense.[1] The general aim of the

[1] Chas. F. Warner: *The Annals of the American Academy of Political and Social Science*, Vol. 33, p. 56.

school is to give to men employed in the trades a chance to broaden their technical training and thus make themselves more efficient artisans. It differs from foreign continuation schools in placing the emphasis upon training in the school shops. In Germany and England the evening continuation schools aim to extend the work of the elementary schools in language, mathematics, drawing, and science, with special reference to the application of the subjects to particular industries. Training in the use of tools and machines is left to the shops and factories in which the student is employed during the day. In America the main object of the evening trade school at the present stage of its development is to supplement the imperfect and highly specialized training of the shop by giving machine hands, helpers, and apprentices a wider experience in shop practice than is possible in the industrial shop.

CHAPTER VI

THE TRAINING OF VOCATIONAL TEACHERS[1]

I. The Prussian Plan. — We have now been agitating the question of vocational education for a number of years and have here and there organized schools of the vocational type; but we have scarcely begun to think of the most important desideratum in connection with this new movement; namely, the training of vocational teachers. Educational reform which overlooks the teacher is but a dream. Before we can successfully introduce new subjects into the curriculum we must have qualified persons to teach them. What is meant by these statements will become clear after a brief consideration of the training of teachers for vocational schools in Germany. In 1885 the salaries of such teachers in Prussia were smaller than those of the State schools and were paid by the local authorities. The teachers occupied a lower social rank than regular teachers,

[1] The facts concerning Germany are drawn chiefly from an article in the *Report of the U. S. Commissioner of Education* for 1911, on "Training of Vocational Teachers in Germany," by Edwin G. Cooley.

and were not entitled to a pension. Now the vocational teacher is paid by the State, has a life tenure (in cities), has a pension for himself and his widow and orphans, and, if he be a university graduate, has a free dwelling or a cash equivalent, and enjoys an income equal to the best academic salaries. This prosperity has come to him as the result of being properly trained for his work.

1. *Building Trades and Mechanical Engineering.* — In the Prussian schools for the building trades and schools of mechanical engineering no special provision has been made for the training of teachers. It is the custom to employ in such schools graduates of higher technical institutes who have been successful in the industries and have an interest in teaching. Very few ordinary academic teachers are found in these schools, even for teaching academic subjects. In an effort to keep in close touch with the industries, practical men are selected as teachers, and these are encouraged to devote a part of their time to the industries. In order to improve such teachers in the service, the State grants them leave to visit other cities, leave with pay for further study, and permission to engage in private occupations in the line of their specialties.



GAINING PRACTICAL EXPERIENCE. PUPILS MAKING STRUCTURAL CHANGES IN THE BUILDING OF THE VOCATIONAL SCHOOL FOR BOYS, NEW YORK.

2. *Industrial Arts.* — During the last few years courses of study have been arranged for the training of teachers in the industrial arts. For instance, Architect Riemerschmidt, of Munich, gives a course in furniture design and interior architecture. The Trade School of Magdeburg has a course in flat ornamentation. Professor Behrens, of Düsseldorf, has a course in lettering. Mural painting and decoration are taught by Professor Mahrbutter at Charlottenburg. Teachers are assisted by grants from the State or municipality to journey to these several places for the purpose of study. Teachers of the textile branches enjoy similar advantages.

3. *Continuation Schools.* — At first these schools were taught by elementary school teachers, who seldom possessed the necessary skill. Consequently these teachers at present all receive special training in art, commercial subjects, language, and arithmetic. In 1909 the sum of $47,600 was expended in training continuation teachers. The number of such instructors is about 12,000, of whom some 550 are employed in the daytime, and the remainder at night. Those who have investigated the subject tell us that much remains to be done in the proper training of this class of teachers.

4. *Vocational Teachers for Girls' Schools.* — These schools are the most fortunate of all so far as adequate training of teachers is concerned. There are three State schools for this class of teachers, one at Posen, one at Rheydt, one at Potsdam. For admission a pupil must be a graduate of higher girls' school or girls' middle school. There are three groups of teachers of vocational work for women in Prussia: (*a*) Teachers of women's *handiwork;* (*b*) teachers of *household arts;* (*c*) vocational teachers for the *industries.* Handiwork consists of knitting, crocheting, sewing, and embroidery. Household arts include cooking and ordinary housework. Teachers for the industries are prepared to teach older girls in the special continuation schools the finer handiwork required in tailoring, dressmaking, and millinery. These must not only take the course provided in the training school, but must supplement this work by half a year of service in the actual industry and a probationary year in teaching. Only then does the candidate receive a license to teach.

Following are examples of several of the numerous courses offered in the three State institutions named: —

Handiwork

Subjects	Weekly Hours First Semester	Second Semester	Entire Number of Hours
Handiwork	9	12	420
Machine sewing, etc.	8	6	280
Study of materials	1	1	40
Drawing	4	2	120
Pedagogy	2	1	60
Practice teaching and method	2	5	140
Hygiene	1	1	40
German and civics	2	2	80
Arithmetic	1	—	20
Singing and gymnastics	4	4	160
Total	34	34	1360

Household Arts

Subjects	Weekly Hours First Semester	Second Semester	Entire Number of Hours
Cooking	10	10	400
Handiwork	3	—	180
Housework, including washing and ironing	6	3	60
Natural science, including knowledge of food	3	3	120
Domestic economy, including household accounts	—	1	20
Pedagogy	2	1	60
Practice teaching and method	—	7	140
Hygiene	1	1	40
German and civics	2	2	80
Arithmetic	1	—	20
Drawing	2	2	80
Singing and gymnastics	4	4	160
Total	34	34	1360

II. **The Munich Plan.** — In Munich trade teachers are trained in a different way. Every year, as the need arises, the Director of Education issues a notice that first-class men engaged in trade are wanted for the different branches of wood and metal work. As soon as the applications are received, the credentials are inspected and a list is made of candidates who are deemed suitable. These are then examined. The test includes the execution of a piece of practical work, the drawing of plans of that work, an estimate of the expense entailed, and a written description of the steps involved. If the candidate passes, he is required to practice for six months, without pay, in the workshops of instruction provided for the purpose. In the second half year of practice he receives seventy-five cents a day. In the meantime he also attends a course of lectures on the theory of education, on technology, on tool and machine construction. At the end of the year he is examined again on the same subjects he had in the first test, plus the lectures heard during the year. Besides, he is required to prove his teaching ability before a class of pupils. If he passes this ordeal, he becomes a trade teacher at $535 a year.

III. **The Wurttemberg Plan.** — The vocational schools of this Kingdom are probably the most efficient in the world. They fall into four general groups: (1) the machine trades; (2) the building trades; (3) the industrial arts; (4) the commercial group. In the smaller places a teacher must be skilled in the leading industry of the place, and must know something of other branches of trade. Only in the largest schools is it possible to employ teachers who can qualify in only one of the four groups of industries.

Teachers of the building trades are at present sent to Karlsruhe in Baden to be trained. This school has the reputation of being the best of its kind in Germany. Here the student takes a course of three and a half years. The applicants are selected from the experienced and efficient elementary and secondary teachers, who already possess thorough pedagogical training. They have been passed through at least six years of a secondary school and so are well grounded in cultural studies. Wurttemberg grants them an allowance of $240 per year while they are at Karlsruhe. After completing the course they must spend from six months to a year in actual shop practice in the industries.

Teachers of the commercial continuation schools

of Wurttemberg are sent for special courses to excellent training schools maintained in Leipzig, Mannheim, Cologne, and Berlin. Candidates for this training are likewise selected from the elementary and secondary schools.

Similar provision is made for training teachers of industrial arts. These are usually sent to schools in Stuttgart or Munich.

IV. **The Baden Plan.** — The Grand Duchy of Baden was one of the earliest European States to inaugurate a system of vocational education, and it has to-day the best trained vocational teachers in the world. Its famous school at Karlsruhe for the training of vocational teachers was founded in 1878. It has courses for commercial teachers, industrial teachers, and the building trades. The thoroughness of the instruction may be inferred from the few following details of the requirements: —

To be admitted to the commercial department the student must be (1) a citizen of Baden; (2) must have passed at least through the seventh year of a secondary school or possess a license as elementary school teacher; (3) must have had a year of actual mercantile experience, if a teacher, or two years of such experience, if he has merely completed the

seventh secondary school year. The instruction covers these twelve subjects: (1) German composition; (2) German business correspondence; (3) commercial mathematics; (4) bookkeeping; (5) foreign languages; (6) stenography; (7) typewriting; (8) general economic geography; (9) political economy and science of finance; (10) legal principles; (11) history of commerce; (12) lectures on teaching and theory of method.

For admission to the industrial division of the Karlsruhe school the applicant must be (1) a citizen of Baden; (2) must have passed through the seventh year of a secondary school or possess a license to teach in an elementary school; (3) must have attended the first three classes of the Building Trades School in Karlsruhe. The examination is divided into a preliminary and principal test. The preliminary includes (1) teaching ability; (2) German composition; (3) mathematics; (4) descriptive geometry; (5) physics; (6) chemistry; (7) elements of mechanics; (8) free-hand drawing and painting.

The principal examination covers the following: —

For the building trades: (1) Theory and design of building construction in stone, wood, and iron; (2) elements of the theory of mechanics.

For the machine trades: (1) Theory of mechanics; (2) elements of electrotechnology; (3) elements of the theory of building construction.

For both architectural and machine trades: (1) Grammar of form and elements of the history and technique of industrial art; (2) science of materials and mechanical technology; (3) applied drawing and painting; (4) modeling; (5) political economy and legal knowledge; (6) bookkeeping and calculation of cost; (7) teaching and theory of method.

V. **Summary.** — Two points are conspicuous in this brief survey of teacher training in Germany: one is the thoroughness of preparation; the other is the extraordinary effort that is made to keep the school in close touch with industry. Evidently the government does not intend to waste ammunition by random firing. The pupil is to be fitted for a definite work; and the teacher is required not only to know the technique of that work, but to know actual employment conditions of the industry. In Prussia the teacher of the building trade is a graduate of a technical school who has been successful in the building industry; and he is encouraged to devote a part of his time to the industry while he is teaching.

In the same State the vocational teachers for girls' schools must not only be trained in special schools, but must serve half a year in the industry which they are to teach. In Munich the teachers are drawn entirely from the industries and are trained in pedagogy. They are successful artificers who take up teaching. In Wurttemberg experienced teachers of cultural subjects are trained in the technique of a vocation. But before they are permitted to teach in a vocational school they must spend from six months to a year in the industry. In Baden candidates for vocational schools are experienced teachers or persons who possess an academic culture represented approximately by a graduate of an American high school. These candidates may not teach vocational subjects until they have completed the training school course and served a year or two years in the industry.

VI. **Plans in the United States.** — Contrast these methods with our own, as illustrated by the following example: —

A farmer friend of mine recently employed a young graduate of the Cornell School of Agriculture as a farm hand. This boy was city-bred and had never worked on a farm; but he has a degree in agriculture

and is looking for a position as superintendent of a farm! He is entirely ignorant of the most rudimentary processes of farming. His knowledge is wholly theoretical. There is not a clodhopper who cannot give our Cornell graduate points on hoeing corn, milking cows, or planting potatoes. This is the sort of thing Germany takes pains to avoid by compelling the teacher of carpentry to be an actual carpenter, the teacher of sewing an actual dressmaker, the teacher of bookkeeping an actual accountant. The school must keep in touch with actual conditions of trade and commerce.

1. *Teachers of Agriculture.*[1] — There are in the United States 52 institutions known as "agricultural and mechanical colleges." These all receive an appropriation from the national treasury for the purpose of maintaining courses in agriculture and mechanic arts. In addition to the above colleges there are sixteen institutions for colored students which furnish industrial education and receive national aid. Of the State colleges of agriculture, thirty-five are offering courses intended to fit students to become teachers of agriculture, mechanic arts, or domestic science. Of the institutions for colored

[1] See *Report of U. S. Commissioner of Education*, 1911, Vol. 2, p. 995.

students, Hampton Institute, Virginia, is the only one that prepares teachers of agriculture. As there is only a nominal government control of these schools and colleges, there is no uniformity in the courses of study and method of training teachers. That such training is often theoretical in character and not very thorough, as compared with German standards, may be inferred from one or two quotations from the U. S. Commissioner's Report: —

"*University of Idaho.* — The department of agricultural education offers 5 courses: Development of agricultural education (2 hours); methods of teaching agriculture (2 hours); rural sociology (3 hours); agricultural economics (3 hours); and methods in agricultural extension (3 hours). Agricultural students may elect 10 hours' work in general education."

"*Massachusetts Agricultural College.* — The department of agricultural education established by provision of the State legislature in 1907, offers 5 courses: Meaning of education (3 hours); history and theory of vocational education (3 hours); methods in agricultural education (3 hours); teachers' agriculture, a selection and review of the agricultural sciences adapted to school work (3 hours); seminar in education with special reference to agriculture (3 hours). Seniors preparing for teaching have practical work with children in the college school gardens. Summer school courses are given in elementary agriculture, and in agricultural pedagogy. Correspondence courses are offered in agriculture, the prin-

ciples of agricultural education, and practical exercises for grammar and high school teachers. The department devotes part of its time to aiding the introduction and teaching of nature study, school gardening, and agriculture in the public schools. It has furnished the services of an instructor to the North Adams State Normal School, who has devoted one half of the college year to supervising instruction in agriculture and nature study at the normal school and its practice schools."

The following State Normal Schools also give instruction in teaching agriculture: Jacksonville, Ala., Los Angeles, Cal.; State Teachers College, Col.; State Normal School, Athens, Ga.; Illinois State Normal University; North Adams Normal School, Mass.; State Normal School, Springfield, Mo.

The difficulty of teaching agriculture in rural schools in such a manner as to create a love for farm life, add dignity to farm labor, and check the tide of emigration flowing from the farm to the city, is well expressed by the Wisconsin *Report of the Commission upon the Extension of Industrial and Agricultural Training*, submitted to the governor in 1911. I quote as follows: —

"At present the great majority of the teachers are women, brought up in the city, unacquainted with farm life, and much of their agricultural teaching has little weight.

"The rural schools need a competent body of young men,

brought up on the farm, trained in agricultural schools, and experienced as teachers. With state aid sufficient to encourage the payment of adequate salaries for efficient workers, these schools would reach 300,000 young people annually, and come in close personal contact with not less than 50,000 farmers, or one fourth the entire number of the state.

"Fully one half of the pupils in these schools are girls, and their needs should be supplied by providing instruction in domestic science as effective as that asked for agriculture."

2. *The Cincinnati Plan.* — Cincinnati has found it desirable to imitate the Munich plan. Here the chief difficulty has been, says Frank B. Dyer, formerly Superintendent of Schools, not in securing the interest of employers, or the approval of labor organizations, or the willingness of the boys, or the funds from the Board of Education, but in securing properly qualified teachers. The teacher of a part-time school must know the technique of trade to command the respect of employers and foremen. He must at the same time have skill in the technique of teaching sufficient to interest the pupil. And, lastly, he must meet the demands of the school board as to character and scholarship. This is a rare combination of skills. After corresponding with technical schools all over the country and finding no suitable person, Superintendent Dyer finally

found a man who had worked nine years in the shops and had then taken up teaching as a profession. By and by his old love for the shop induced him to return to the industry, where he had recently been for several years teaching apprentices. He had worked over his whole pedagogical and scholastic outfit in terms of shop practice. This man was secured to take charge of the Continuation School. He was at first the only shop teacher employed; as fast as the need arose, he trained his assistants. The school now prepares its own teachers, and draws all its candidates from the industries.

3. *Other Agencies for Training Vocational Teachers.* — Many universities and colleges offer training in the teaching of vocational subjects. Thus New York University prepares teachers of sewing, cooking, shop work, both in regular course and in the summer school. Columbia University, in its new School of Practical Arts, gives training to students who wish to teach cookery, wood or metal work, music, physical training, and nursing.

The U. S. Commissioner of Education [1] gives an account of The Stout Training School for Teachers of Domestic Science and Art at Menomonie, Wisconsin.

[1] *Report*, 1911, Vol. 1, p. 313.

This school was established in 1903. Its president is Mr. L. D. Harvey. No detail as to course of study or number of students is furnished; but so far as one is able to infer from the facts submitted, the institution resembles the Columbia School of Practical Arts, though it is much narrower in scope, being limited in purpose to the preparation of teachers of household arts. Pratt Institute in New York, State Normal College at Albany, State Normal School at Buffalo, Carnegie Institute at Pittsburg, Simmons College at Boston, and scores of other colleges, universities, and normal schools are to-day giving some sort of training to teachers for industrial schools and courses.

4. *A Study of American Conditions.* — The National Society for the Promotion of Industrial Education published recently, through a special committee, a preliminary survey of the problem of training teachers of industries.[1]

(1) *Certification.* — The Committee finds that "the State should be the sole certifying authority." The study is limited to the consideration of state-aided vocational schools. The financial authority

[1] *Bulletin No. 19, The Selection and Training of Teachers for State-Aided Industrial Schools* for *Boys and Men*, 1914. National Society for the Promotion of Industrial Education.

usually demands supervisory power as a precaution against waste and inefficiency. Hence follows the corollary that the State must decide who may teach. The examination should include four things: (*a*) written examination; (*b*) credentials; (*c*) personal interview; (*d*) practical demonstration. The certification of industrial teachers should be in charge of a department "separate and apart from the certification of regular teachers."

(2) *Sources of Supply.* — For the sake of clearness, vocational teachers are divided by the committee into (*a*) shop teachers, and (*b*) teachers of related subjects. Three sources of supply are suggested for the former; namely: (*a*) the industries; (*b*) technical institutions; (*c*) normal and training schools. Each of these sources contributes desirable elements of a shop teacher's equipment, but none of them seems to be able to produce a sufficient and satisfactory supply of teachers. The industry gives the trade experience which is a fundamental prerequisite of a teacher of trades, but this experience is not sufficient without some general education and teaching ability. Technical institutions, such as the Massachusetts Institute of Technology and the engineering schools of colleges, train men

for vocations differing widely from that of shop instructor in an industrial school. The graduates usually have no trade experience, and they are not trained to teach. Furthermore, they command better pay than that received by a shop teacher. Normal schools represent the final stage of a continuous process of education beginning in childhood. They do not, therefore, have trade-trained students, nor can they themselves furnish the trade training. The conclusion is that the *chief source of supply must be the trades.*

For the supply of teachers of related subjects four sources are suggested: (*a*) the industry; (*b*) engineering schools of college grade; (*c*) the intermediate technical school; (*d*) the normal school. The trade furnishes men with trade experience who lack technical knowledge. The engineering school supplies the technical knowledge, but cannot give practical contact with trade. The intermediate technical school, such as Pratt Institute or the Department of Applied Industries of Carnegie Institute of Technology, *promises to be the most satisfactory source of supply.* Preparatory schools for teachers, like normal schools and educational departments of colleges, give the student

adequate knowledge of a general character; but such knowledge is frequently not of the right kind. It is not organized with special reference to any industry.

(3) *Proposed Schemes for Training Shop Teachers.* — The committee proposes four possible plans: —

(*a*) *Scholarships.* — Select a shopman who has an interest in teaching and give him a scholarship of not less than $500 per year to get his training as a teacher in some institution already established. This plan has the special merit of commanding all the pupil's time, attention, and energy in an all-day school without subjecting him to the hardship of a total loss of wages.

(*b*) *Special State Industrial-and-Normal School.* — The industrial department of the school should be organized on a unit trade basis; that is, it should consist of a series of schools, each fitting for some one trade. In connection with this institution, a normal school should be operated which could utilize the industrial school as a part of its facilities for observation, practice teaching, and study under the best conditions. The Vocational School for Boys in New York might serve as the industrial half of such a school. With comparatively little

additional expense a normal department could be organized, and then New York would have a first-class training school for vocational teachers.

(*c*) *Special Day Course in an Intermediate Technical School.* — The objection to this plan is the economic difficulty involved in the loss of wages. The objection is met by the scholarship plan.

(*d*) *Special Evening Course in Some Technical School or College.* — One objection to an evening school course is the limited number of hours available for schooling. Another is that the student is not in good condition after a hard day's labor to engage in severe mental effort. The advantages are (*a*) that the student suffers no loss of wages; (*b*) the sacrifice involved is in itself an effective method of selecting promising material; (*c*) practice teaching can be had in the evening school; (*d*) and the plan opens an abundant source of supply for trade-trained teachers.

5. *Conclusion.* — It will be seen from this brief abstract of the committee's proposals, that practically every one of its schemes has been anticipated by European experience. The committee believes that the trades must be the chief source of supply for shop teachers. Munich came to the same con-

clusion long ago. The committee thinks scholarships will be necessary to induce men with trade experience to take the pedagogical training. Wurttemberg has long had in operation a similar plan, but different in an important particular. There experienced teachers are sent to trade schools to learn shop practice. Finally, the committee recommends a combination industrial-and-normal school, where the pupil can get trade experience and pedagogical training in one institution. Practically the same thing is done in the famous training school for vocational teachers at Karlsruhe, where the conditions of admission are that the student must have completed the seventh year of a secondary school (three years of an American High School) and the first three classes of the Building Trades School in Karlsruhe.

The situation may be summed up by saying that a teacher of trades must be expert in two arts, — the art of teaching and the art of some craft. In general, the method of securing teachers is to select some person who has already become expert in one of these arts, and then make him proficient in the other art. We either take a teacher and teach him a trade, or take a craftsman and teach him how to



A Class in Jewelry Design, New York Evening School of Industrial Art.

teach. By prolonging the period of apprenticeship it will be possible, in a combination trade-and-normal school, to teach both arts at once or in the same institution. If the candidate is already expert in one art, the State has to pay for the experience in the form of a subsidy. If the pupil has no skill in either art, added expense is entailed by prolonging the period of training. In either case the State must pay for skill in two arts.

CHAPTER VII

VOCATIONAL GUIDANCE

I. **Scope.** — By common consent vocational guidance has become associated with the general movement in behalf of vocational education. The subject is so new that few of us know the connotation of the term. A few years ago we had a national conference on vocational guidance in New York, with delegates from scores of cities. One of the writer's friends, who was a prominent government official at the time, accepted an invitation to deliver an address at one of the sessions of the conference. Immediately after making this engagement he came to see me and said: "I have promised to deliver an address on vocational guidance, or some such thing. Tell me what is vocational guidance. I never heard of it!" I explained as well as I could and referred him to some literature. His address made a hit. But he confessed afterward that he learned from other speakers much more than they learned from him!

In general terms vocational guidance includes the study of the child; the preparation of the child for a specific calling; the study of industries; and the placing of the child into a position with a future, which he can fill with profit to himself and his employer. The chief end of the business is not, as many suppose, finding a job. Securing work is usually carried on in connection with vocational guidance, but it is only a small part of the field covered. The movement has already made large progress in New York, Boston, Chicago, Cleveland, Philadelphia, Pittsburg, St. Louis, and other cities.

A study in detail of the work in New York and Boston will show us what vocational guidance has come to mean.

II. **Vocational Guidance in New York City.** — The following facts are taken chiefly from the *Tenth Annual Report of the Commissioner of Labor*,[1] which is wholly devoted to industrial education.

In New York the father of vocational guidance is Mr. Eli W. Weaver,[2] a teacher in the Boys' High School of Brooklyn. With the enthusiasm of Pes-

[1] Washington, D.C., 1910.

[2] Of conditions in New York, the author is in a position to speak somewhat from personal knowledge.

talozzi and the zeal of a missionary he has devoted his leisure hours for many years to the welfare of boys who leave school to go to work. Originally Mr. Weaver's efforts were devoted wholly to the placing of boys. Other features of guidance developed gradually from the placement experience. For example, it was found desirable to keep in touch with the boy after he had his position to see what he did with it, to help him overcome difficulties, to keep him informed as to opportunities for increasing his efficiency, and to incite him to profit by such opportunities. It was found necessary, also, to study employers, the inducements they offer, the kind of help they need, and how they treat their employees. As a result of this line of investigation a large amount of information concerning industries accumulated. This enabled Mr. Weaver to place boys so wisely that the employer who once tried the plan always came back for more help.

1. *The Students' Aid Committee.* — From these small beginnings of a single unselfish individual, an important organization has been evolved. Through the High School Teachers' Association, each high school in the city, by 1908, had a "students' aid committee," which carried on the work inaugurated

by Mr. Weaver in Boys' High School. The object of the aid committee at this time was stated as follows: —

(*a*) To gather information as to the qualifications necessary for entering the skilled trades and professions.

(*b*) To secure information as to the opportunities the city offers to young people who wish to prepare for such trades and professions, and as to the time required, and expense involved.

(*c*) To ascertain what restrictions are placed by labor unions and professional bodies upon candidates who desire to enter trades and professions.

(*d*) To ascertain the average remuneration and relative permanency of trades, commercial pursuits, and professions.

Here is a specimen of the kind of information that was thus made available to young people seeking employment: —

(1) "The average annual earnings of women over sixteen years of age in the shirt factories of New York is $327; the average earnings of over three hundred stenographers employed in the several departments of the city governments of which the pay rolls were examined was $954. These women secured their appointments because of their special training. Their income from their work is over $600 a year more than

is the income of the factory women referred to. At the age of twenty-five, a woman can also secure such an annual income for life by a cash payment of $12,000 to a life insurance company. This means that a thorough training in English, stenography, and typewriting is worth as much in this market as the annual income of $12,000.

(2) "The average annual earnings of four hundred and one nurses in the city service is $760. The average annual earnings of over twelve thousand women making women's clothing according to the Census Bureau, is $398.

"The four years spent by a girl in high school and the two years in a nurses' training school enables her to earn $362 a year more than the sewing women earn. The sewing woman could increase her annual income by $362, if she would buy an annuity in a life insurance company which would bring her $362 a year. This annuity would cost her over $7000 in cash. The special training of the nurse girl must be worth this $7000."

2. *A Central Vocational Bureau.* — By 1910 the aid committee had demonstrated its usefulness to the satisfaction of the financial authorities, and therefore each high school was granted an appropriation of $250 for the necessary expenses of vocational guidance, and a central vocational bureau was organized to take general charge of the work. This bureau is in charge of a committee composed of representatives of associations of employers, labor unions, educational, social, and church workers,

and contributors, together with school authorities under the direction of the City Superintendent.

(1) *Functions.* — The functions of this bureau as formulated by the committee are as follows: —

(*a*) To offer advice and direction to young people of exceptional abilities who cannot receive the necessary assistance from the vocational teachers of their respective schools.

(*b*) To serve as a means of communication between employers and the employment agencies or vocation teachers of the several schools and colleges from which students go out to work.

(*c*) To collect information in regard to the opportunities for workers of ordinary ability and others of exceptional training; information concerning the personal and educational qualifications required for admission into different lines of work, and concerning the tests of efficiency which are set for promotion into the different grades of the same lines of work; and information regarding legal enactments and labor-union restrictions, this information to be gathered from: —

1. Associations of employers,
2. Individual employers,
3. Statistical publications and government reports,

4. Social workers,

5. Vocational records of workers of known capacities.

(*d*) To make available through special publications, lectures, pamphlets, and conferences, for the use of students who are to choose a vocation and also for parents and social workers, general information in regard to the opportunities which are offered in the city, and to supply committees on courses of study or on syllabi of instruction with material which will enable them to increase the vocational content of the teaching material in the several subjects of study; and to supply the employment agencies of the several schools with specific and confidential information in regard to the terms and conditions of work with particular employers.

(*e*) To keep a registry of students of the evening trade and continuation schools who are prepared because of the completion of the prescribed courses of study for employment in higher forms of service than those in which they are engaged.

(*f*) To assist students of high capacity to complete advanced courses of study: —

1. By means of scholarships,

2. Through part-time employment,

3. Through vacation employment.

III. **Vocational Guidance in Boston.** — In Boston a number of organizations have assumed the functions of vocational guidance. At the head of these is the Vocation Bureau. Other bodies working in harmony with the Bureau are the committee on vocational direction of the School Board, the Home and School Association, the Girls' Trade Education League, and the Women's Municipal League. The School Board's committee was formed for the express purpose of beginning the work of guidance within the schools before the pupils leave the elementary grades. The three independent organizations appoint delegates to sit with the executive board of the Vocation Bureau. This arrangement assures the closest possible coöperation of all concerned and avoids duplication and waste of effort.

The Vocation Bureau was organized in 1909 by public-spirited men and women in the fields of labor, education, commerce, manufacture, and social work. Its work is carried on by a director and an executive board of thirteen members. There is no charge of any kind for its services. The Bureau is not primarily an employment office, nor does it

prescribe vocations for children. Its chief function is gathering reliable information about occupations, and applying such information to enable children and parents in the intelligent choice of a career. It is also conducting a training school for teachers and school officials who have been assigned as vocational counselors by the school department.

1. *Work of the Vocation Bureau.* — The work of the Vocation Bureau is divided into the following four groups of activities: —

(*a*) To maintain an office for the collection and dissemination of information about occupations.

(*b*) To impress upon parents and children the need of general education and special training for desirable occupations, and to prolong, by advice and assistance, the school period of young people.

(*c*) To offer personal counsel to young people in school and at work to enable them to plan wisely for their educational and vocational progress.

(*d*) To consult with people of all ages who have personal problems concerning their vocations.

(1) *Information.* — Under the head of information, the Bureau has on hand the results of the study of more than one hundred occupations. This information is carefully filed and is employed as a

basis for vocational counsel. Here is a brief abstract of a study of

The Machinist

"A machinist is a constructor of machines and engines, or one versed in the principles of machines; in the general sense, one who invents or constructs mechanical devices of any kind. The two grand divisions of the occupation are general machine work and tool making. The pattern maker is a woodworker. The four divisions of people receiving wages are the apprentice boy, the journeyman, the foreman, and the superintendent. The chief danger of the occupation is from dust in cutting and grinding metals, especially in brass working. There is an ever-widening field for the expert machinist, and the future of the industry will be good in all lines.

"Pay in the beginning ranges from $3 to $8 a week, according to age, conditions of apprenticeship, or shop entered. Boys do errands, act as messengers to machinists, do drilling, milling, lathe work, planing, shaping, and run light machines. A young man, after a period of learning such processes, earns from $12 to $15 a week. A journeyman earns $2.50 or $2.75 a day. A foreman earns from $21 to $25 a week. The salary of the superintendent ranges from several hundred to many thousand dollars a year.

"In this occupation a boy is rarely taken under fifteen years of age. He should have a grammar-school education. There are found many graduates of high and technical schools. These generally become foremen or superintendents. A boy should have natural mechanical skill and should be strong and in good health."

(2) *Education.* — The second branch of the Bureau's activity is concerned with the further education of young people, whether they be still in school or already employed. There is on file in the office detailed information as to educational opportunities in the vicinity of Boston. One chart supplies a list of schools for industrial training; another gives a list of institutions that supply advanced vocational training; a third offers a list of schools, public and philanthropic, where commercial instruction may be had; a fourth gives the list of organized opportunities for those who are physically handicapped, such as the blind, the deaf, and the crippled.

(3) *Counsel.* — Under the third head there is a vast and complex system for giving advice to young people concerning their further progress. There are daily conferences for this purpose. Numerous publications of the Bureau are at the service of applicants. Speeches and lectures are given, and a library is maintained.

(4) *Vocational Advising.* — Lastly, there is a branch for general or unclassified advice to all sorts of people. The man who has no fixed plan of life comes for assistance. Young men employed in various places of the city come with reference to

changes of vocation. Parents come regularly to consult about the welfare of their children. Employers seek the advice of the bureau on various matters.

IV. **Summary.** — From this sketch of the work of vocational guidance in New York and Boston, it is evident that the employment bureau is an insignificant feature of a very large enterprise. Lack of self-knowledge is the cause of many tragedies. "Know thyself," is the first exhortation of the Vocation Bureau to youth. But it does not stop with advice. It supplies the facilities and material for self-study. Secondly, the Bureau makes a survey of the field of human industry and offers to the youth accurate information concerning the conditions, qualifications, dangers, rewards, and prospects of the various kinds of employment. Having set youth to the study of self and the study of industry with a view to a wise choice of an occupation, the Bureau finally exerts its inspirational offices to induce the young to make thorough preparation for the chosen vocation; and offers such assistance in this preparation as may be desired or required. An employment bureau in itself is of small value to an immature child. There is no

profit in bringing the boy and the job together, unless the two are adapted to each other.

The matters of prime importance are an intelligent comprehension of one's capabilities, a wide knowledge of employments, and thorough preparation for one's chosen life work.

CHAPTER VIII

APPRENTICESHIP AND COMPULSORY EDUCATION

I. **European Experience.** — In the days of old all arts and crafts were learned from masters by a system of apprenticeship. The vocational school is a modern substitute or supplement of apprenticeship. Therefore no account of vocational education is complete which fails to take note of the relation of the apprentice to the industry, the school, and the State.

1. *Switzerland.*[1] — There is in this country a State apprenticeship system supervised by a central committee of the Swiss Union of Arts and Trades in coöperation with the National Department of Industries and the Cantonal and Communal labor organizations. The apprentice enters into a formal contract with his employer which defines the rights and duties of both parties. It specifies the length of term, the hours of labor, and the time when the

[1] See *Bulletin No. 19*, 1913, U. S. Commissioner of Education, p. 64.

apprentice shall attend a trade continuation school. The master is bound to teach the youth the whole trade. At the end of the period the young workman must submit to an examination prepared by the Department of Industry and the Communal Council. The test is partly on theory, but chiefly on practical skill. If he passes, he receives a diploma. Apprentices are encouraged by a system of prizes, such as deposits in savings banks, books, instruments, and tools, which are awarded to the candidates passing the best examinations.

2. *Germany.* — In Germany the laws and courts make a sharp distinction between young people who are learning a trade and those who are merely employed. The apprentice is one who is employed in an industry primarily to learn its technique. He is called a *Lehrling*. The other, who works primarily for wages, is known as an *ungelernte Arbeiter* (unskilled worker). In America the term *operatives* covers the case of young people who are employed in the mills. They attend machines or become skilled in a single operation; but they learn no trade. In Germany it is considered of the utmost importance that young persons employed in the industries should be apprentices rather than opera-

tives; for on this distinction depends not only the individual development and well-being of the worker, but welfare of the State as well, since the youth of to-day is the citizen of to-morrow.

(1) *The Imperial Industrial Law.* — Apprenticeship in Germany is minutely regulated by a national law. Only citizens may employ apprentices. For handwork, the employer must be at least twenty-four years of age and have passed the examination of a master workman. He has authority to teach not only his own trade, but also a related industry.

Children may leave school at the age of fourteen and go to work. They have the option of entering upon skilled or unskilled work. The temptation is to choose the latter on account of the immediate prospect of wages. Consequently, many children, whose parents are oppressed by poverty or handicapped by lack of foresight, become *ungelehrte Arbeiter*, receiving wages that range from $1.92 to $2.40 per week the first year, and from $3.60 to $4.80 the fourth year.

Some of the more fortunate parents keep their children in a secondary school until the age of sixteen. At this age the boy receives a one-year military service certificate, and he is much more desir-

able as an apprentice than a boy of fourteen on account of his greater maturity and more extensive education.

(2) *Apprenticeship Contract.* — The contract by which an apprentice is bound to a master is required by law to be in writing, but is held valid under certain conditions if it is only verbal. In smaller factories the written contract is frequently omitted on account of the ignorance or carelessness of parents. The terms of the contract must specify: —

(*a*) The industry;

(*b*) The length of service;

(*c*) The mutual services required; and

(*d*) The conditions under which the contract may be broken. Every contract has a probationary period, during which either party may withdraw. This period is normally four weeks, but may be prolonged to three months by mutual agreement. In order to insure proper supervision of apprenticeship the law requires the employer to turn over the contract to the local police authorities on demand, or to a gild, if the master is a gild member. In Prussia the contract further provides for:

(*e*) Compulsory insurance against sickness;

(*f*) Time and opportunity to make a "masterpiece"; and

(*g*) Specifications as to who shall pay for the material of the masterpiece and who shall finally own it.

The master must teach the whole trade, or at least all kinds of work occurring in his business. His instruction is all practical, and need not cover the theoretical phase. He must himself train the apprentice or assign a properly qualified assistant to do the work. He is further obliged to look after the conduct and morals of the apprentice.

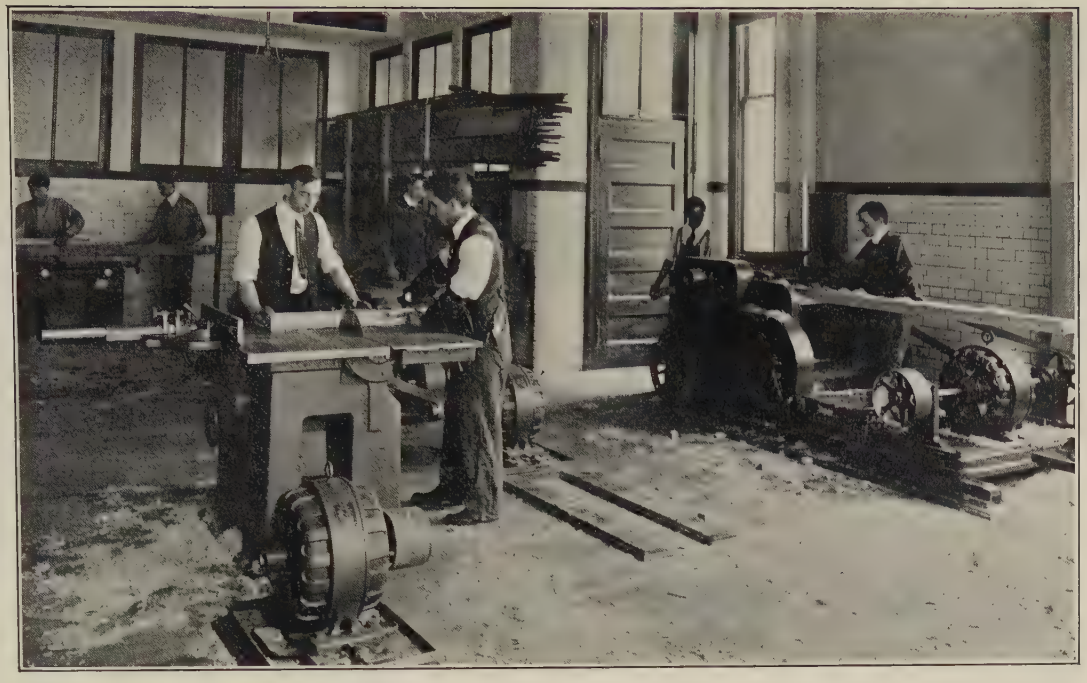
For a violation of the contract the employer is liable to a fine of not more than 150 marks or to imprisonment for not more than four weeks.

(*a*) *Mutual Services.* — The services required of the apprentice include: obedience, truth, industry, and probity; the performance of mechanical duties other than those of his trade; the proper care of tools intrusted to him; attendance at an improvement school. He may be discharged for stealing; deception; disobedience; carelessness about fire; the commitment of grave offenses against the master or members of his family; harming goods of the employer or a fellow workman; immoral conduct in the master's family; neglect of duties in the shop;

failure to attend school. He may withdraw from the contract if his master abuses him or refuses to pay his wages, or if the business is dangerous to his health.

(*b*) *Examination.* — At the conclusion of the term of apprenticeship the master is obliged to give the apprentice a certificate stating the name of the trade, the length of service, the proficiency attained, and conduct. If the apprenticeship is in handwork, the master must give the apprentice opportunity to produce his masterpiece and to take the prescribed State examination. This is conducted by the local gild or chamber of industry. The examining committee consists of a chairman and two or more assistants, at least half of whom must themselves have passed the masters' examination. For admission to the examination the apprentice offers his apprenticeship certificate and his certificate of attendance at an improvement school. If he passes, he becomes a journeyman and receives a one-year certificate of military service. If he fails to pass, he may receive further instruction from a new master at the expense of his old master.

II. **History of the American Apprenticeship System.** — The modern apprenticeship system has its



The Wood-working Department, Vocational School for Boys, New York.

origin in the medieval handicraft work. The training of the people in those days was in the hands of the gilds, of which, at the end of the fifteenth century, there were thirty thousand in England alone. There were gilds for most of the breadwinning arts in which men engaged — craft gilds, art gilds, merchant gilds, trade gilds.[1] Boys were apprenticed to men following an occupation such as the youth or his parents preferred, and then began the training. The period of tutelage was fixed in most cases at seven years. The apprentice usually lived in the house of his master, who provided him with board and clothes and taught him the art and mysteries of his trade. The master and the pupil were in a sense on a plane of equality, inasmuch as both came from the same social class, and the pupil looked forward to the time when he himself would be a master. At the conclusion of the term of service the young man became a journeyman workman. He usually wandered away from his native town, sometimes going over seas to learn the foreign secrets of his craft. After three years of such experience, he presented evidence of his accomplishments. "If

[1] Note, for example, Rembrandt's famous painting in the Royal Museum at Amsterdam, entitled *Syndics of the Cloth Merchants' Gild.*

he were a craftsman or an artisan, he made a lock or a bolt or some more artistic piece of work in the metals base or precious, and if this sample was considered worthy of them by his fellow-gildsmen, he was admitted as a master in the gild. This was the highest rank of workman, and the men who held it were supposed to be able to do anything that had been done by fellow-workmen up to that time. The piece that he presented was then called a masterpiece, and it is from this that our good old English word masterpiece was derived."[1]

1. *Legal Indentures.* — In early times apprenticeships in the United States were much like the medieval system. Legal indentures were the rule, in which the boy was bound to a manufacturer, merchant, craftsman, or mariner for a period usually ending at the youth's majority.[2] Both parties appeared in court and swore to carry out the terms of the contract. For the boy the indenture involved a loss of liberty, for if he ran away, he was classed in effect as a slave. He lived with his master, like

[1] *Education: How Old the New*, by James J. Walsh, Fordham University Press, New York, 1910, p. 158.

[2] For the facts of American apprenticeship the author is indebted largely to *Bulletin No. 19*, 1913, of the U. S. Commissioner of Education, entitled *German Industrial Education and Its Lessons for the United States*, by Holmes Beckwith.

his medieval predecessor, and like him he did odd jobs by which he learned nothing and by which his apprenticeship was unduly prolonged.

The industrial revolution discussed above and the expanding ideas of personal liberty caused the indenture gradually to grow into disfavor, and by 1860 it had so far declined that it was the exception rather than the rule. The effect of the discontinuance of a legal contract is illustrated by an incident within the personal knowledge of the author: —

(1) *A Concrete Case.* — A certain boy named Joe was apprenticed in the year 1870 to a manufacturer to learn the trade of carriage painting. There was only a verbal contract, by the terms of which Joe was bound for two and a half years to do such work in the shop as the employer might direct. He was required in addition to perform household drudgery in the employer's family, such as running errands, setting the table, washing dishes, and cleaning house. The employer on his part agreed to teach the boy the trade of painting and trimming carriages. There were at that time only four trades involved in building a carriage; namely, those of the wheelwright, the blacksmith, the painter, and the trimmer. The boy was therefore to be taught

to complete a carriage after its arrival from the blacksmith shop. In addition to the teaching of the two trades, the employer engaged to take Joe into his own family and furnish him free board and lodging. At the conclusion of the apprenticeship he promised to pay the boy twenty-five dollars in cash. To a widowed mother was left the duty of supplying Joe's clothing during his term of apprenticeship.

There was no guarantee on either side that the terms of the contract would be lived up to. Joe was set to work at priming and sandpapering running gears, rubbing down filling, grinding paints, and other similar disagreeable jobs. From the beginning he more than earned his board and lodging. He was not permitted to know the secrets of the finer parts of the art, such as putting on finishing coats, varnishing, striping, etc. Trimming he did not learn at all. At the end of the first year the employer sold out and little Joe was left with a year's experience and a broken contract. He found another employer, however, who made use of such skill as the boy had acquired, but taught him no more. The boy gradually picked up his trade in a fashion; but there was no one whose business it was to inquire whether he learned much or little.

2. *The Entrepreneur.* — The next stage of the revolution brings us to the modern era of great industrial enterprises and extreme specialization in production, caused chiefly by the substitution of the machine for hand labor. The "master" of medieval and early United States craftsmanship now becomes the "captain of industry," or what the French call the *entrepreneur*. He no longer trains the apprentice himself, but delegates this duty to subordinates. He no longer knows the apprentice, he does not work with him. He cares little for his personal welfare. The industry is so organized that it is unprofitable to the business to teach the boy the whole trade. It pays better to make him expert in some one process and keep him at that. The manager can get journeymen trained elsewhere, especially in Europe, so he is not interested in the production of skilled workmen.

3. *The Trade-union and Apprenticeship.* — The apprenticeship system has been revived, however, in a new form. The Bureau of Statistics of Labor in Massachusetts ascertained in 1906 that out of fifty-eight employers, thirty-one had a system of apprenticeship. Of one hundred four officers of trade-unions, fifty-five represent trades where apprenticeships

were found. A similar study in 1907 showed that of one hundred twenty-four Ohio manufacturers, fifty-eight maintained a system of apprenticeship. Mr. Beckwith is of the opinion that the average throughout the country is lower than that of the cases cited; that is, less than 50% of employing establishments assume the responsibility of training skilled workmen. Among the railroads, fifty-five have 7053 apprentices in three hundred sixty-eight shops, while sixty-seven shops have no apprentices. According to the Vocation Bureau of Boston forty-three States have laws governing apprenticeships, but most of these laws are dead letters.

Dr. J. M. Motley [1] has shown that apprenticeships in the United States were at first governed by law or indenture, then by custom, then by trade-unions, and, lastly, by agreements between employer and employee. He says: "Of the 120 national and international trade-unions, with a total of 1,676,200 members affiliated in 1904 with the American Federation of Labor, 50 unions, with a membership of 766,417, do not attempt to maintain apprenticeship systems. The remaining national unions,

[1] *Apprenticeship in American Trade Unions*, by J. M. Motley, Johns Hopkins University Press, 1907.

that is, about 70 of the 120 affiliated in 1904 with the American Federation of Labor, with a membership of 900,000, together with some half dozen unaffiliated national unions, attempt more or less successfully to enforce apprenticeship regulations."

The attempt of the union to control apprenticeships after the manner of the ancient gilds by insisting upon journeymen's ability as a condition of membership is a failure. "Apprentices, after obtaining a smattering of a trade or becoming half trained, frequently run away and take up work elsewhere as journeymen." [1]

It is evident that one of the pressing needs of the hour is a series of new laws for the States governing apprenticeship.

One of the most advanced of such laws in the United States is the Wisconsin Apprentice Law of 1911. (See Appendix VII.)

III. **Compulsory Education.**[2]—There is a tendency everywhere to couple child-labor and compulsory education laws. In the evolution of society child-labor regulation appears first. As a community

[1] Beckwith: *op. cit.*, p. 15.

[2] The facts submitted in the section on compulsory education have been drawn largely from U. S. Bureau of Education, *Bulletin No. 2*, 1914, *Compulsory School Attendance.*

passes from an agricultural to a manufacturing stage child-labor laws become necessary to prevent the exploitation of childhood in factories. In Arnold Bennett's *Clayhanger* is an eloquent passage showing conditions in England so late as 1835:—

"At the age of seven, his education being complete he was summoned into the world. . . . The man Darius was first taken to work by his mother. . . . The next morning, at half past five, Darius began his career in earnest. He was 'mould-runner' to a 'muffin-maker,' a muffin being not a comestible but a small plate, fashioned by its maker on a mould. The business of Darius was to run as hard as he could with the mould, and a newly-created plate adhering thereto, into the drying-stove. This 'stove' was a room lined with shelves, and having a red-hot stove and stove-pipe in the middle. As no man of seven could reach the upper shelves a pair of steps was provided for Darius, and up these he had to scamper. Each mould with its plate had to be leaned carefully against the wall, and if the soft clay of a new-born plate was damaged, Darius was knocked down. The atmosphere outside the stove was chill, but owing to the heat of the stove, Darius was obliged to work half naked. His sweat ran down his cheeks, and down his chest, and down his back, making white channels, and lastly it soaked his hair."[1]

[1] The author has no warrant for accepting this story as history, except the intrinsic probability of the story itself. Americans need not cross the ocean, even in this year of grace, to see Childhood outraged by Industry.

Child-labor legislation is invariably followed by compulsory education. The sequence is being illustrated at this moment by the States of southern Europe, by Russia, and by some of the States of the American Union.

1. *Germany.* — The compulsory attendance service of Germany has long been the envy of the rest of the world. Out of a school population of 5,754,728 in Prussia, only 548 children escaped the law in 1901. The results of the strict enforcement of compulsory education laws are seen in the almost total abolition of illiteracy, the high general average of education, and the industrial efficiency of the nation. Compared with conditions in our own country, where on an average, according to Professor Thorndike's findings, only about one-third of the children graduate from an elementary school, the following percentages of elementary graduation in certain German cities are illuminating: Bremen, 98.6; Frankfort on the Main, 99.2; Wiesbaden, 99.4; Leipzig, 99.5; Dresden, 99.6.

The Imperial Child-labor Law forbids, without exception, the employment of children under twelve. A thorough system of inspection by church and civil authorities and the registration of children at a

central bureau are among the means employed to enforce the compulsory attendance and child-labor laws. Information concerning illegal absence from school is given by the school authorities to the police, whose duty it is to enforce attendance and prosecute delinquent parents or guardians. The punishment prescribed by law is fine or imprisonment or both. Attendance at continuation schools is left to the discretion of local authorities. In most states a pupil must attend such a school in connection with his apprenticeship until he is seventeen. In Wurttemberg the compulsory age is eighteen, and a law is now pending in the Prussian Landtag making eighteen the limit in that kingdom.

2. *England.* — Parliament has by statute fixed certain minimum requirements and has left to local authorities autonomy within the limits prescribed. The first law, passed in 1876, provided a penalty for employing children under ten years of age and children over ten who could not show the required certificate of previous school attendance or of proficiency in reading, writing, and arithmetic. In 1881 these provisions were extended so as to require all school districts to define the age limits for exemption from school attendance. The new law em-

powered the Education Department to fix these limits in case the local authority failed to act. The act of 1900 empowers school attendance officers to make fourteen years the upper compulsory limit, and provides a penalty of twenty shillings for the violation of the law. A child may be exempted at the age of thirteen provided he is credited with 350 " attendances " for each of the preceding five years. Children between twelve and fourteen may have partial exemption by having credit for 300 " attendances " during each of the preceding five years.

The results of this legislation to date are as follows:

Seven of the local authorities have fixed the compulsory age from five to thirteen. All the rest (327) have made the period from five to fourteen.

The enforcement of the law is primarily in the hands of teachers and school officers. When they fail the case is turned over to a magistrate. Teachers complain that magistrates are too lenient; they recommend that the enforcement of the law be intrusted to the educational authorities. In proof of the alleged laxity of the courts the federation of education committees, at their annual meeting in 1912, cited the fact that 720,000 children in England and Wales were daily absent from school. They

also asserted that the school registers contain from 50,000 to 60,000 children mentally deficient, only 12,000 of whom are provided for in classes suitable for their condition.[1]

3. *Scotland.* — In Scotland the compulsory age is from five to thirteen. The Act of 1908 authorizes school boards to make attendance at continuation schools compulsory. The enforcement is in the hands of magistrates, and parents are subject to fine or imprisonment for violations.

4. *Ireland.* — The law here makes the compulsory age from six to fourteen, with certain exceptions.

5. *France.* — All children between the ages of six and thirteen are required to attend school. A local school committee, of which the mayor of the commune is chairman, is charged with the duty of enforcing attendance. Each year the mayor prepares a list of the children of school age, whose parents must notify him whether the children are to be instructed by public or private agencies. The mayor also sends to the director of each school a list of the children who should attend. At the end of each month the director sends to the mayor an

[1] Anna Tolman Smith in U. S. Bureau of Education, *Bulletin No. 2*, 1914: *Compulsory School Attendance.*

abstract of the school register, with the number of absences and the reasons therefor. The school committee may summon parents for warning and censure. In case of renewed violations the responsible parties are brought before a magistrate for fine or imprisonment.

This system has not been satisfactory in practice. A bill pending in the Chamber of Deputies abolishes the communal school committee and transfers their duties to the justice of the peace.

6. *Switzerland.* — The Federal constitution requires the Cantons to provide sufficient elementary education free to all children "without prejudice to freedom of faith and conscience." In fulfillment of this obligation every Canton has passed a compulsory education law, and in seventeen Cantons compulsion applies to continuation schools. The compulsory period varies in length in the several Cantons from six to nine years.

7. *The United States.*[1] — All the States of our Union have compulsory education laws except Alabama, Florida, Georgia, Mississippi, South Carolina, and Texas. In Maryland, Louisiana, Virginia,

[1] In the United States we have 5,500,000 illiterates. It has been estimated that the annual cost of this illiteracy in underproduction is $500,000,000.

and Arkansas, the laws do not apply to the entire State. In this, as in other educational reforms, Massachusetts has been a pioneer. That famous Order of the General Court, issued in 1647, which is the foundation of the American common school, is also the warrant for all the compulsory education laws of the land. The order contains this provision:

"It being one chiefe project of that old deluder, Satan, to keep men from the knowledge of the scriptures, as in former times, keeping them in an unknowne tongue, so in these latter times, by perswading them from the use of tongues, so that at least, the true sence and meaning of the original might bee clouded with glosses of saint seeming deceivers; and that learning may not bee buried in the grave of our forefathers in church and commonwealth, the Lord assisting our indeavors; *it is therefore ordered by this courte and authority thereof*, That every towneship whin this jurisdiction, after that the Lord hath increased them to the number of fifty howsholders, shall then forthwith appointe one within theire towne to teach all such children as shall resorte to him, to write and read; whose wages shall be paid either by the parents or masters of such children, or by the inhabitants in generall, by way of supplye, as the major parte of those who order the prudentials of the towne shall appointe; provided, that those who send theire children, bee not oppressed by paying much more than they can have them taught for in other townes. *And it is further ordered*, that where any towne shall increase to the number of one hundred families or howsholders, they shall sett up a grammar schoole, the

masters thereof being able to instruct youths so far as they may bee fitted for the University; and if any town neglect the performance hereof above one yeare, then every such towne shall pay five pounds per annum to the next such schoole, till they shall perform this order." [1]

Concerning this act of the General Court, James Russell Lowell has written: "It was in making education not only common to all, but in some sense compulsory on all, that the destiny of the free republics of America was practically settled." [2] It is true that two hundred sixty-seven years after the passage of the law we still find half a dozen States without compulsion, but we are marching on, and a few years more will make the vote unanimous in favor of compulsory education. It is also true that the laws we have are ineffective in many cases; but we are improving rapidly. Each year sees some progress. In good time the laws will be perfected and public opinion will insist upon their better enforcement.

(1) *The School Census.* — One of the indispensable conditions of a successful compulsory education law is an accurate enrollment of the children of school age. The school furnishes the names and addresses

[1] *Records of the Massachusetts Colony*, Vol. 2, p. 203.
[2] *New England Two Centuries Ago.*

of children who should be in school, the school register shows the names of those who are in school, and thus the compulsory bureau has the information needed to make school attendance universal. This is the theory. In practice there are many difficulties of administration which in America we have not yet overcome. For instance: —

"In 1909 a permanent census bureau created in cities of the first class in New York revealed 518 children in the city of Rochester unlawfully out of school; 6318 in Buffalo; and 23,241 in New York City. Though the machinery of the compulsory attendance and child-labor laws had been in operation over 16 years and with much success, yet over 30,000 children were unlawfully out of school." [1]

An enumeration of children of school age is provided for in many States, but with what poor success may be seen from the following comment on the school census: —

"In 1909 the authorities of the United States Census made a study of the school census taken during that year and compared the results with the actual enumeration of children made by the Federal agents during the same year. In 26 States and Territories the number of the children reported in the school censuses was less than the number found by the

[1] *Laggards in Our Schools*, Leonard P. Ayres, Charities Publication Committee, N. Y., 1909, p. 191.

Federal agents. The local authorities failed to report more than a third of a million children of school age, the error in some cases being as high as 25 per cent. In 17 States the local agents reported a quarter of a million children more than there actually were, the error of overstatement running as high as 15 per cent." [1]

Further improvement was made in the New York City Census in 1914 by a consolidation of the Permanent Census Bureau and the Department of Compulsory Education into a new Bureau of Compulsory Education, School Census, and Child Welfare. The difficulty of keeping track of all the children in a city of the size of New York may be imagined when one considers the constant stream of foreign and native immigration, coupled with the frequent changes of address on the part of citizens. The writer has single schools in which more than two thousand changes of registration occur in the course of a year. Several of his schools admit during September and October some eight hundred children and discharge three or four hundred on transfers. The record card of a certain boy recently inspected by me showed that the child had been in eight different schools in a single year. No wonder the legend has arisen that

[1] *Bulletin No. 2*, 1914, p. 13, U. S. Bureau of Education.

some parents find it cheaper to move than pay rent! By a system recently inaugurated in New York every change of registration is reported to a central bureau, which thus has a record of every pupil discharged from a school for any reason. It is hoped by this means to prevent the loss of many children who have heretofore taken transfers and then failed to appear in any other school. It is, however, impossible to follow up successfully children who change addresses several times in a month. Nor is it possible to prevent the giving of false addresses for the purpose of eluding the attendance officer.

(2) *The Attendance Officer.* — The school census and the school register show what children of school age are absent from school. The next step is to secure universal and regular attendance. "The average effective school year in the United States is only 111.8 days out of an average of 156.8 days the schools are in session. Granting the time necessary for the average child to complete a grade is 156.8 days, the child attending the average time of 111.8 days would need 11.2 years in which to complete an eight-year course. In other words, the child would lose three years, which in most cases

would mean the elimination of that child before the eighth grade was reached. If 180 days are necessary to complete a grade, a child attending 111.8 days each year would be 12.9 years completing eight grades." [1] Poor attendance accounts for the fact that only about one third of the children in certain typical American cities complete the eighth grade before leaving the school.[2] Definite information on this relation of absence to promotion is contained in the following table from the Report of the New York School Inquiry: —

Attendance and Promotion [3]

	Absent 10 Da. or Less	Absent 11 to 20 Da.	Absent 21 to 30 Da.	Absent 31 to 40 Da.	Absent 41 or more Da.
Number (1A)	17215	8708	5010	3188	8891
Per Cent of Total Register	40.02	20.25	11.65	7.41	20.67
Per Cent Promoted . .	89.47	85.75	79.02	71.01	40.56
Per Cent not Promoted .	10.53	14.25	20.98	28.99	59.44

Non-attendance, so far as it is due to delinquency, is more the fault of parents than of children. The number of truants is relatively small. Of 56,450

[1] W. S. Deffenbaugh, in U. S. Commissioner of Education's *Bulletin No. 2*, 1914, p. 17.

[2] See p. 62. Compare with European condition, p. 147.

[3] *Report of Committee on School Inquiry*, Board of Estimate, Vol. 1, p. 566.

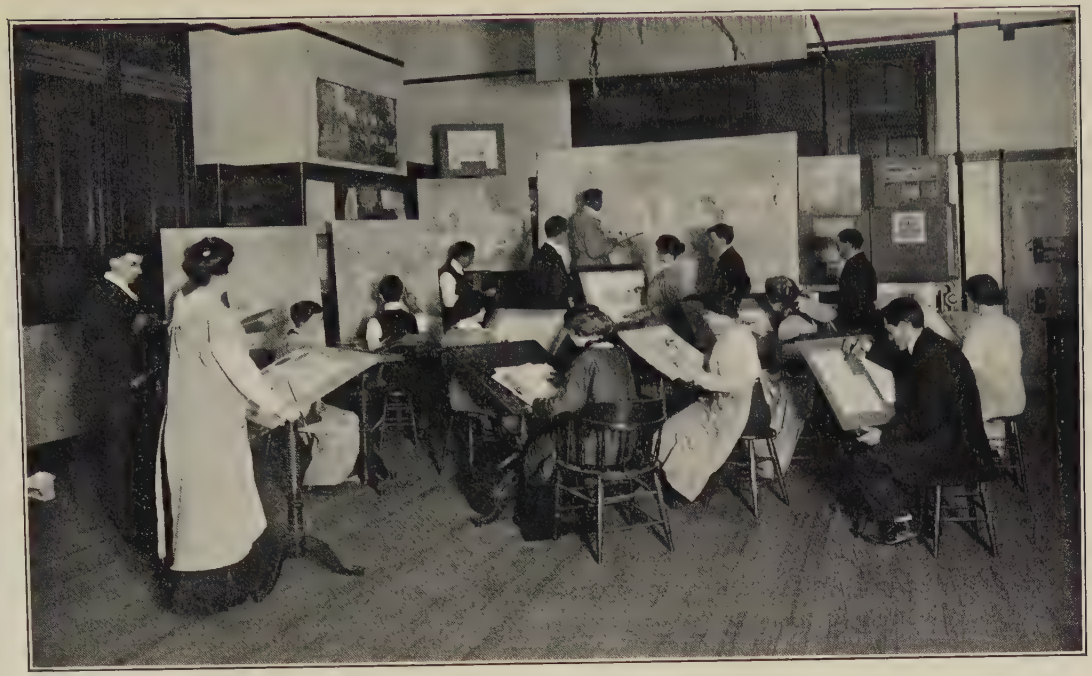
cases of absence in St. Louis in 1911–1912 only 1709 were truancy. Of 128,032 cases referred for investigation to attendance officers in New York, 1912–1913, 18,097 were truancy. The "net register" of that year was 804,237. The truancy cases were 2.2% of this register, and 14% of the absences investigated. Sixty-two per cent of the absences were legitimate, being due to illness, poverty, transfer, removal from city, work with employment certificate, etc. The illegal absences, numbering 31,261, were due chiefly to parental neglect or parental inefficiency.[1]

In the majority of the States the officer charged with the duty of dealing with delinquent parents and children in the matter of non-attendance is the truant officer, more properly called attendance officer. In some cases the sheriff or deputy sheriff shares the responsibility with the attendance officer. In Michigan, the police assist attendance officers, and in Idaho the probation officer is charged with the enforcement of the law.[2]

The effectiveness of an attendance officer depends chiefly on three things: —

[1] *Fifteenth Annual Report of the City Superintendent of Schools*, 1913, p. 276.

[2] *Bulletin No. 2*, 1914, pp. 28–77, U. S. Commissioner of Education.



THE CLASS IN MURAL DECORATION, NEW YORK EVENING SCHOOL OF INDUSTRIAL ART.

(*a*) His own efficiency.

(*b*) The promptness with which absences are reported to him.

(*c*) The extent to which his measures for enforcement are backed by school authorities and courts.

In rural districts the attendance officer is frequently employed at some gainful occupation as his regular work, while his services as an officer of the law are performed incidentally. Insufficient salaries are the chief cause of low-grade service. A good attendance officer is a man (or woman) of considerable education, good character, pleasing dress and address, firm will, some knowledge of law, and self-possession sufficient to prosecute parents and children in a court. Such a person is worth from a thousand to two thousand dollars a year, according to length of service and ability.

The information concerning non-attendance is supplied to the attendance officer by the school or by the census bureau. The effectiveness of enforcement depends, therefore, largely upon the promptness with which absences are reported. Some laws are so poor that no provision whatever is made for reporting absences. Some states require teachers to report once a month, some only once or twice a

year. In New York City, teachers are required to send a post card to the parent for even one day's unexplained absence. After two cards have been sent without result, the case is given to an officer. Thousands of teachers visit pupils' homes to make personal inquiry as to the cause of absence. In this way they incidentally acquire a fund of information about home conditions which makes them more sympathetic teachers and frequently helps to remove the cause of non-attendance.

The ultimate authority for the punishment of recalcitrant parents and children rests in the courts. There is a general complaint that the courts are inclined to be too lenient and thus to thwart the efforts of school authorities to enforce the compulsory laws. The following statistics concerning New York City in 1912–1913 speak for themselves: [1] —

Parents summoned to Magistrates' Courts	711
Discharged	380
Reprimanded	201
Fined	130
Amount of fines	$404

When it is recalled that only the most flagrant cases of defiance are taken to court these figures

[1] *Twelfth Annual Report of the City Superintendent of Schools*, p. 278.

indicate how discouraging is the endeavor to teach parents respect for the law.

(3) *The School Visitor.* — Within recent years the " school visitor " or " visiting teacher " has been employed as an efficient means of adjusting the school to the home or the child to the school. One of the most important qualities of a good teacher is sympathy, — the ability to " rejoice with them that do rejoice, and weep with them that weep." That sort of sympathy is born of knowledge. In order really to enter into the lives of the children one must know their home conditions. Such information can be gained most effectively by visiting the home. But the average teacher does not find time to make visits and does not regard such activities as among her legitimate duties. Each child therefore remains a sort of unknown quantity in the teacher's problem; and we know that a problem in algebra with even two unknown quantities is apt to be difficult. Very many of the problem cases in school are the result of ignorance and consequent lack of sympathy on the part of the teacher. Teacher gets cross because Mary doesn't understand her " examples." The real trouble may be that Teacher doesn't understand Mary. The child may live in a cellar or in a single

room with six or eight other persons. How is Mary going to " do her sums " in such a home? Perhaps John is a problem in school. Examine his daily career and you will find that he has problems of his own. Every afternoon he falls asleep in his class. Teacher calls him lazy, scolds him, keeps him in after school, scores demerits against his record, sends him to the Principal for discipline. John gets up at two o'clock every morning and helps his father on the baker's wagon; or he is out every night until eleven selling papers, shoestrings, or chewing gum. Every delinquent child is more sinned against than sinning. This I say even though he commit all the crimes in the juvenile calendar. His birth and his environment have made him what he is. Now, the visiting teacher is for John and Mary. Her duty is to put the school in possession of the home facts and the home in possession of the school's point of view. She is the official adjuster. In the writer's supervisory district two visiting teachers are employed, both at private expense. The Board of Education of New York has thus far been able to secure funds for only five or six school visitors. On page 196 will be found a report of one of our visiting teachers which gives a pretty fair idea of

the sort of work she is doing. The school to which she is attached has a register at present of 3716. It is located in a congested portion of The Bronx. This visitor is paid out of private funds contributed by friends of the school.

CHAPTER IX

CONCLUSION

I. **The Danger.** — The American public is vaguely aware that something is needed to make our education more practical; but very few of us know exactly what is wrong or what should be done. The average citizen depends upon the press for information on public affairs. In the matter of education editors are singularly uninformed or misinformed. One rarely reads an editorial on schools that is not replete with error. As for news writers, their habitual lack of accuracy and striving for sensational effect renders them absolutely incapable of telling the truth about education, even when they know it. In New York (with one or two exceptions) the doings of the Board of Education seldom occupy more than a paragraph or two in the columns of even the most widely read papers. The matter reported is not an intelligent summary of the proceedings, but usually some incidental item, like an attack on a public official or the dismissal of a delin-

quent teacher, magnified out of proportion, while the really important things are ignored.

Even persons who pose as educators are often woefully ignorant of the actual state of affairs in education. On November 23, 1912, a New York daily paper published an article from the pen of a certain Professor in Princeton University, from which the following is quoted: —

"I believe our school system is feeble and foolish. We are not getting half the results we have a right to expect from our schools. With a reasonably efficient organization we should be able to get for half the cost more than all the advantages and less than all the disadvantages we now obtain from our schools. . . . The schools to-day are mostly occupied imparting stereotyped information and incidentally promoting democracy — democracy in ideas and ideals, in morals, and manners, in contagious diseases and even more contagious immorality. Bullying, . . . diphtheria, lying, scarlet fever, cheating in class and examination, whooping cough, profanity, measles, all-round cultivated incompetence, tuberculosis, weakened eyes, . . . are some of the more objectionable of the miscellaneous evils disseminated, though not invented by our school system.

"But our schools are open to a still severer indictment. They have no vital connection with the life of the community from which they draw their pupils and their funds. They fail to prepare pupils to do anything."

There is much more abuse of the same sort. This diatribe was published prominently on the editorial page, and was further emphasized by a commendatory editorial. As an instance of the fairness and honor of modern journalism, I may cite the fact that I wrote to this newspaper a signed reply to the Professor's article, which was never published. Because the Editor had already committed himself to the side of the Professor, he refused to disturb his equanimity by permitting the publication of facts and arguments bearing on the other side of the case.

II. **A Common Error.** — The case of the Professor is cited because, though he belongs to our profession, he illustrates an error common among uninformed laymen. There is a large element in the community, generally represented on the school board, which can see no use for culture studies. "The question of common-sense," says Lowell,[1] "is always, 'What is it good for?' — a question which would abolish the rose and be answered triumphantly by the cabbage. The danger of the prosaic type of mind lies in the stolid sense of superiority which blinds it to everything ideal, to the use of anything that does not serve the practical purposes

[1] *Essay on Chaucer.*

of life." The prosaic " man has no notion that two and two make five, which is the problem the poet often has to solve." The fact that elementary schools have taught no vocational subjects in the past is no good reason why in future they should teach nothing but vocational subjects. All the children who can afford to take culture courses and are qualified for such work should be given the opportunity. The free passage from the kindergarten to the university must not be abolished. But, on the other hand, the schools are to do a great deal more in the future than they have done in the past for the ninety-five per cent who never reach the university, for the ninety per cent who do not go through a high school, and for the sixty-six per cent who do not even graduate from the elementary school.

III. **The Remedy.** — Our school system is not perfect; but neither is it as feeble and foolish as the Professor would have us believe. His assertion, without proof, that we should be able to get all the good we now have out of the public schools for half the cost, does not sound like the utterance of a man with the scientific habit of mind. That sort of exaggeration may arrest the attention of thought-

less readers and factless editors; but it certainly contributes nothing to the solution of the problem before us. Well-read educators know what the trouble is and know the remedy. The trouble is not the dissemination of measles, and the remedy is not muck-raking. We do not need a new curriculum for existing schools, although the curriculum needs revision from time to time to keep the school abreast of scientific discovery and responsive to economic and social changes. What we do need is a new system of schools to supplement the work of the present system and to serve as a connecting link between education and industry. There is no sense in berating our schools for not teaching vocations. They were never expected to do so. Separate schools are needed for special education; and as fast as possible these are being organized. Vocational education in Europe is not a part of the public school system, but is under the control of ministries of commerce, agriculture, industries, etc. The elementary school can do little more than teach the tools of knowledge. It must always teach reading, and writing, and number, and geography, and history. These subjects with music, drawing, and physical training, are enough to occupy the first six or



"Washing Up"—Quitting Time at the Vocational School for Boys, New York.

eight years of the school. If European experience counts for anything, vocational subjects will be taken up by the pupil after the completion of his thirteenth or fourteenth year. Some pre-vocational instruction may be offered by the regular school; but actual vocational training for young people already employed, will be offered in separate day or evening schools.

President Gompers, of the American Federation of Labor, in the following extract from a report of his, shows himself wiser than the Princeton Professor: —

> "Our movement in advocating industrial education protests most emphatically against the elimination from our public-school system of any line of learning now taught. Education, technically or industrially, must be supplementary to and in connection with our modern school system."

IV. **National Aid.** — There was pending for several years in Congress a bill introduced by Senator Carroll S. Page, of Vermont, which, if passed, would have provided national coöperation with the several states in encouraging instruction in agriculture, the trades, industries, and home economics in high schools. It also offered national grants for the teaching of these subjects in State Normal

Schools, and maintaining extension departments in State Colleges of Agriculture and Mechanic Arts. The appropriations proposed by Senator Page began with $2,077,000 in 1913 and by a progressive increase could have reached a total of $14,752,000 per annum in 1921.

A new bill is pending in Congress at present (known as " H. R. 7951 ") which proposes aid similar to that of the Page bill.[1] As passed by the House and amended by the Senate it offers aid in the teaching of agriculture and home economics by maintaining extension departments in State Colleges of Agriculture and Mechanic Arts. A significant phrase in the act is that the work is to be carried on " without discrimination as to race." It appropriates $1,090,000 the first year and by successive annual increases reaches a total of $4,690,000 in 1922. Thereafter the annual appropriation is $5,290,000. Each appropriation is conditioned on the contribution of a like amount by the State for the same purpose.

Summary. — The following resolutions, adopted by the National Association of Manufacturers, at a convention held in New York, on May 21, 1912, are

[1] See Appendix VI.

a fair statement in concise form of the problem of vocational education in the United States: —

1. "Continuation Schools for that half of the children who leave school at fourteen years of age, and mostly in the fifth and sixth grades, these continuation schools to be liberally cultural and at the same time to be extremely practical and related as directly as possible to the occupations in which the several students are engaged.

2. "The development of a modern apprenticeship system wherein by contract the respective and equal rights of employer and employee are fully recognized, the entire trade is taught, together with such other subjects as are essential to good citizenship.

3. "The development of secondary continuation or trade schools, by which the more efficient of the great army of boys and girls who will enter the continuation schools may progress from these lower continuation schools, as in some other countries, to the foremost places in industry and commerce.

4. "Compulsory education through adolescence, being until the seventeenth or eighteenth year, attendance being in the all-day school until the fourteenth year, and thereafter in either the all-day schools or in the continuation schools for not less than one-half day per week, without loss of wages for hours in school.

5. "The strengthening of all truancy laws and the development of public sentiment in support thereof.

6. "The training of teachers in thoroughgoing methods of industrial practice, including as part of such training extended experience in actual shop work.

7. "The establishment of independent State and local

boards of industrial education consisting of one-third each, professional educators, employers, and employees, thereby insuring as in the more successful European countries, the proper correlation of the schools and the industries.

8. "The development of the vocational and creative desires of the concrete, or hand-minded children now in the grades, discouraged, anxious to quit, and often called backward, only because the education now tendered them is abstract and misfit.

9. "The establishment of shop schools and part-time schools whenever practicable.

10. "The establishment of departments or centres of vocational guidance so that the great majority of the children who now enter industry at fourteen with no direction, 85 % falling into the 'blind alley' occupations, may with the reversal of these figures, as in some other countries, enter, under advice, intelligently and properly into the progressive and improving occupations."

CHAPTER X

TOPICS FOR DISCUSSION AND INVESTIGATION

1. WHAT are the arguments in favor of universal popular education at public expense?

2. Would it be desirable, if it were possible, to have all children receive the benefit of a secondary education?

3. What is a good citizen? Show the relation of profitable and congenial employment to good citizenship.

4. Show the relation of the "habit of success" to physical and mental hygiene.

5. What percentage of our exports are raw material or partially manufactured products?

6. Briefly sketch the industrial and economic revolution of the civilized world that has occurred within the last century.

7. Sketch briefly, giving approximate dates, the beginnings of popular elementary schools under state control, in Germany, England, Scotland, and America.

8. Referring to the history of education among Western peoples, cite instances of three essentially different conceptions of the nature and aim of education, indicating the distinguishing characteristics and leading advocates of each.

9. Which of the European nations has the best system of vocational education? Show by citing details of organization, teaching, and results the reason for your statement.

10. "Next to moral education . . . industrial training is by general consent the greatest and most urgent problem confronting the American people." —*G. Stanley Hall.*

Develop this theme, giving facts and arguments to sustain it.

11. "The only right time for children to be found in the night schools is the daytime."

Discuss this dictum in relation to the New York law requiring boys between the ages of fourteen and sixteen who have not completed the elementary school and are employed in daytime to attend evening school.

12. Mention five important respects in which pupils of the secondary school stage differ from those of the elementary school stage. Show the bearing of these differences on secondary teaching.

13. " It is due to a prejudice, inherited from antiquity, against these arts (*i.e.* the material or manual arts) that their great educational value has not been seen. This value is three-fold." — *Thomas Davidson.*

(*a*) Discuss the view presented in the first sentence of the quotation.

(*b*) What do you understand to be the threefold educational value of these arts?

(*c*) State concisely reasons for and against the introduction of these arts into the elementary course of study.

14. Should vocational education be a part of the elementary school or should it be supplementary to the elementary school?

Give reasons, mentioning a European nation that makes it a part of the elementary school and another that makes it a supplement of elementary education.

15. Explain somewhat in detail what is meant by " vocational guidance."

16. " I think I am not stating the case too broadly when I say that the great improvement and the great change in our system of higher education which marks it off to-day in such a clear way from what it was before 1870 may be traced directly and imme-

diately to the increased emphasis laid upon vocational training." — *Edmund J. James.*

(*a*) Give the names of vocational subjects here referred to.

(*b*) Show how their introduction has modified the college curriculum and affected entrance requirements and attendance.

17. "There are two roads to a broad culture — one by way of a course that is general from beginning to end, the other by a narrower, vocational course which, if pursued long enough, is bound to lead into paths covering the broad field. Dr. Kerschensteiner of Munich, when in conference with the Illinois Educational Commission in Chicago, indicated that it was his belief that of the two roads the latter was the best. It is not in harmony with the curricula of our American schools, but it is in harmony with one of the fundamental laws of our educational psychology." — *Charles A. Bennett.*

(*a*) Show what is meant by the first sentence.

(*b*) Discuss, with illustrations, the last sentence.

18. It has been pointed out that Latin, when it was first introduced into the modern curriculum, was a vocational study. Explain. Has Latin vocational value now? Discuss.

19. "It used to be that a boy wishing to learn a trade was bound out or apprenticed to a master for a term of years. He became a member of the master's household, lived under his master's eye, very much in the manner of an adopted son, and learned his trade under the master's direct supervision and tutelage. This way of learning was possible in the day of small industries when each manufacturer or tradesman performed the full round of his trade's activities in the one shop and there was time for hand-work because machine-work did not exist. Now that method is no longer possible." — *Lewis Gustafson.*

(*a*) Discuss the last sentence.

(*b*) Sketch in outline the provisions of a desirable state or federal law governing apprenticeships.

20. To what extent and in what ways can day vocational education and liberal education be carried on together or in close connection?

21. For what callings is vocational education under school conditions possible?

22. What can be done for purpose of vocational education in the case of both boys and girls from fourteen to sixteen years of age?

23. How far, in the successive stages of day voca-

tional education in schools, shall emphasis be laid on *productive work* (with shop hours, shop clothing, and a marketable product), and how far on studies and practices (theoretical work)?

24. How far can the economy and effectiveness of vocational education be increased by coöperative arrangements for part-time work between industries and the school system?

25. Discriminate the following terms as applied to education: (1) *vocational*, (2) *industrial*, (3) *commercial*, (4) *manual training*, (5) *part-time*, (6) *intermediate school*, (7) *differentiated program*, (8) *continuation school*, (9) *improvement school*, (10) *technical high school*.

26. How are vocational teachers trained in Prussia? in Munich? in Baden? in Wurttemberg? in the United States?

27. State the best way to select and train vocational teachers in the United States.

28. Show the relation of an apprenticeship system to vocational education; also the relation of compulsory education laws to vocational education.

29. "Is it wise for a State like New York with 50 per cent of its school district having a valuation of less than $60,000 to ask these small communities

to develop continuation instruction when they cannot properly support their present education? "— *Annual Report*, Commissioner of Education, Albany, New York, 1914.

30. " What kind of school training will meet the permanent requirement of industry and the permanent requirement of citizenship? " — New York Commissioner of Education, *op. cit.*

CHAPTER XI

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CHAPTER XII

APPENDIX I

The New York Law relative to Vocational Instruction

Article 22 of the Education Law of 1910, as amended by Laws of 1913, chapter 747

Section 600. **General industrial schools, trade schools and schools of agriculture, mechanic arts and homemaking, may be established in cities.** The board of education of any city, and in a city not having a board of education the officer having the management and supervision of the public school system, may establish, acquire, conduct and maintain as a part of the public school system of such city the following: —

1. General industrial schools open to pupils who have completed the elementary school course or who have attained the age of fourteen years, and

2. Trade schools open to pupils who have attained the age of sixteen years and have completed either the elementary school course or a course in the above mentioned general industrial school or who have met such other requirements as the local school authorities may have prescribed; and

3. Schools of agriculture, mechanic arts and homemaking, open to pupils who have completed the elementary school course or who have attained the age of fourteen, or who have met such other requirements as the local school authorities may have prescribed; and

4. Part-time or continuation schools in which instruction shall be given in the trades and in industrial, agricultural and homemaking subjects, and which shall be open to pupils over fourteen years of age who are regularly and lawfully employed during a part of the day in any useful employment or service, which subjects shall be supplementary to the practical work carried on in such employment or service.

5. Evening vocational schools in which instruction shall be given in the trades and in industrial, agricultural, and homemaking subjects, and which shall be open to pupils over sixteen years of age, who are regularly and lawfully employed during the day and which provide instruction in subjects related to the practical work carried on in such employment; but such evening vocational schools providing instruction in homemaking shall be open to all women over sixteen years of age who are employed in any capacity during the day.

The word "school," as used in this article, shall include any department or course of instruction established and maintained in a public school for any of the purposes specified in this section. [*As amended by Laws of 1913, chapter 747.*]

SEC. 601. **Such schools may be established in union free school districts.** The board of education of any union free school district shall also establish, acquire and maintain such schools for like purposes whenever such schools shall be authorized by a district meeting. The trustee or board of trustees of a common school district may establish a school or a course in agriculture, mechanic arts, and homemaking, when authorized by a district meeting. [*As amended by Laws of 1913, chapter 747.*]

SEC. 602. **Appointment of an advisory board.** The board of education in a city and the officer having the management

and supervision of the public school system in a city not having a board of education shall appoint an advisory board of five members representing the local trades, industries, and occupations. In the first instance two of such members shall be appointed for a term of one year and three of such members shall be appointed for a term of two years. Thereafter as the terms of such members shall expire the vacancies caused thereby shall be filled for a full term of two years. Any other vacancy occurring on such board shall be filled by the appointing power named in this section for the remainder of the unexpired term.

SEC. 603. **Authority of the board of education over such schools.** The board of education in a city and the officer having the management and supervision of the public school system in a city not having a board of education and the board of education in a union free school district in which city or district a general industrial school, a trade school, a school of agriculture, mechanic arts and homemaking, or a part-time or continuation school, or an evening vocational school is established as provided in this article, is vested with the same power and authority over the management, supervision and control of such school and the teachers or instructors employed therein as such board or officer now has over the schools and teachers under their charge. Such boards of education or such officer shall also have full power and authority:

1. To employ competent teachers or instructors.

2. To provide proper courses of study.

3. To purchase or acquire sites and grounds and to purchase, acquire, lease or construct and to repair suitable shops or buildings and to properly equip the same.

4. To purchase necessary machinery, tools, apparatus and supplies. [*As amended by Laws of 1913, chapter 747.*]

SEC. 604. **State aid for general industrial schools, trade schools, and schools of agriculture, mechanic arts, and homemaking.**

1. The Commissioner of Education in the annual apportionment of the State school moneys shall apportion therefrom to each city and union free school district for each general industrial school, trade school, part-time or continuation school or evening vocational school, maintained therein for thirty-six weeks during the school year and employing one teacher whose work is devoted exclusively to such school, and having an enrolment of at least fifteen pupils and maintaining an organization and a course of study, and conducted in a manner approved by him, a sum equal to two-thirds of the salary paid to such teacher, but not exceeding one thousand dollars.

2. He shall also apportion in like manner to each city, union free school district, or common school district for each school of agriculture, mechanic arts and homemaking, maintained therein for thirty-six weeks during the school year, and employing one teacher whose work is devoted exclusively to such school, and having an enrolment of at least fifteen pupils and maintaining an organization and course of study and conducted in a manner approved by him, a sum equal to two-thirds of the salary paid to such teacher. Such teacher may be employed for the entire year, and during the time that the said school is not open shall be engaged in performing such educational services as may be required by the board of education or trustees, under regulations adopted by the Commissioner of Education. Where a contract is made with

a teacher for the entire year and such teacher is employed for such period, as herein provided, the Commissioner of Education shall make an additional apportionment to such city or district of the sum of two hundred dollars. But the total amount apportioned in each year on account of such teacher shall not exceed one thousand dollars.

3. The Commissioner of Education shall also make an additional apportionment to each city and union free school district for each additional teacher employed exclusively in the schools mentioned in the preceding subdivisions of this section for thirty-six weeks during the school year, a sum equal to one-third of the salary paid to each such additional teacher, but not exceeding one thousand dollars for each teacher.

4. The Commissioner of Education, in his discretion, may apportion to a district or city maintaining such schools or employing such teachers for a shorter time than thirty-six weeks, or for a less time than a regular school day, an amount pro rata to the time such schools are maintained or such teachers are employed. This section shall not be construed to entitle manual training high schools or other secondary schools maintaining manual training departments, to an apportionment of funds herein provided for.

Any person employed as teacher as provided herein may serve as principal of the school in which the said industrial or trade school or course, or school or course of agriculture, mechanic arts and homemaking, is maintained. [*As amended by Laws of 1913, chapter 747.*]

Sec. 605. **Application of such moneys.** All moneys apportioned by the Commissioner of Education for schools under this article shall be used exclusively for the payment of the

salaries of teachers employed in such schools in the city or district to which such moneys are apportioned.

SEC. 606. **Annual estimate by board of education and appropriations by municipal and school districts.**

1. The board of education of each city or the officer having the management and supervision of the public school system in a city not having a board of education shall file with the common council of such city, within thirty days after the commencement of the fiscal year of such city, a written itemized estimate of the expenditures necessary for the maintenance of its general industrial schools, trade schools, schools of agriculture, mechanic arts and homemaking, part-time or continuation schools or evening vocational schools, and the estimated amount which the city will receive from the State school moneys applicable to the support of such schools. The common council shall give a public hearing to such persons as wish to be heard in reference thereto. The common council shall adopt such estimate and, after deducting therefrom the amount of State moneys applicable to the support of such schools, shall include the balance in the annual tax budget of such city. Such amount shall be levied, assessed and raised by tax upon the real and personal property liable to taxation in the city at the time and in the manner that other taxes for school purposes are raised. The common council shall have power by a two-thirds vote to reduce or reject any item included in such estimate.

2. The board of education in a union free school district which maintains a general industrial school, trade school, a school of agriculture, mechanic arts and homemaking, part-time or continuation schools or evening vocational schools, shall include in its estimate of expenses pursuant to the

provisions of sections 323 and 327 of this chapter the amount that will be required to maintain such schools after applying toward the maintenance thereof the amount apportioned therefor by the Commissioner of Education. Such amount shall thereafter be levied, assessed and raised by tax upon the taxable property of the district at the time and in the manner that other taxes for school purposes are raised in such district. [*As amended by Laws of 1913, chapter 747.*]

SEC. 607. **Courses in schools of agriculture for training of teachers.** The State schools of agriculture at St. Lawrence University, at Alfred University and at Morrisville may give courses for the training of teachers in agriculture, mechanic arts, domestic science or homemaking, approved by the Commissioner of Education. Such schools shall be entitled to an apportionment of money as provided in section 604 of this chapter for schools established in union free school districts. Graduates from such approved courses may receive licenses to teach agriculture, mechanic arts and homemaking in the public schools of the State, subject to such rules and regulations as the Commissioner of Education may prescribe.

APPENDIX II

FROM UNIVERSITY OF THE STATE OF NEW YORK, BULLETIN NO. 566, MAY 1, 1914

SUGGESTIVE TWO-YEAR COURSE FOR BOYS

Seventh Year		Eighth Year	
Subject	*Periods a week*	*Subject*	*Periods a week*
Applied mathematics	5	Applied mathematics	5
Shop drawing	4	Shop drawing	4
English and spelling	5	English and writing	5
Industrial geography	4	Industrial history	4
Elementary industrial science	1	Elementary industrial science	1
Citizenship and hygiene	1	Citizenship and hygiene	1
Elements of			
Carpentry		Sheet metal work	
Cabinet making		Plumbing	
Wood turning		Electrical work	
Patternmaking		Machine shopwork	
Molding	20		20
	40		40

SUGGESTIVE TWO-YEAR COURSE FOR GIRLS

Seventh Year

First Half		Second Half	
Applied arithmetic	5	Applied arithmetic	5
English	5	English	5
Industrial geography and textiles	4	Industrial geography and textiles	4
Spelling and writing	1	Spelling and writing	1
Home furnishing and decoration	2	Home furnishing and decoration	2
Costume design	2	Millinery design	2
Music	1	Music	1
Physical training	1	Physical training	1
Citizenship and hygiene	1	Citizenship and hygiene	1
Household science	2	Household science	2
Plain sewing	8	Millinery	8
Cooking	8	Cooking	8
	40		40

EIGHTH YEAR

Subjects	*Periods a week*	*Subjects*	*Periods a week*
Applied arithmetic	5	Bookkeeping	5
English	5	English	5
History	4	History	4
Spelling and writing	1	Spelling and writing	1
Home furnishing and decoration	2	Home furnishing and decoration	2
Costume design	2	Millinery design	2
Music	1	Music	1
Physical training	1	Physical training	1
Home nursing	1	Household economics	1
Household science	2	Household science	2
Dressmaking	8	Millinery	8
Cooking	8	Cooking	8
	40		40

APPENDIX III

AN UNDEMOCRATIC PROPOSAL

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No question at present under discussion in education is so fraught with consequences for the future of democracy as the question of industrial education. Its right development will do more to make public education truly democratic than any other one agency now under consideration. Its wrong treatment will as surely accentuate all undemocratic tendencies in our present situation, by fostering and strengthening class divisions in school and out. It is better to suffer a while longer from the ills of our present lack of system till

the truly democratic lines of advance become apparent, rather than separate industrial education sharply from general education, and thereby use it to mark off to the interests of employers a separate class of laborers.

These general considerations have a particular application to the scheme of industrial education which has been proposed for adoption by the next legislature of the State of Illinois — one of the leading industrial states of the Union, and containing its second largest city. This scheme proposes a separate State Commission of Vocational Education, wherever the community may wish to develop any form of industrial education. In other words, the entire school system of the state as a whole and of such communities of the state as may desire to do something definite in the direction of industrial education is split into two for the education of all above fourteen years of age. Since whatever a state like Illinois may do in such a matter is sure to have influence in other states in this formative period, educators all over the country should be aroused to help ward off what, without exaggeration, may be termed the greatest evil now threatening the interests of democracy in education.

The statement of the scheme ought to be enough to condemn it. The least reflection shows fundamentally bad features associated with it. First, it divides and duplicates the administrative educational machinery. How many communities have such an excess of public interest in education that they can afford to cut it into two parts? How many have such a surplusage of money and other resources that they can afford to maintain a double system of schools, with the waste of funds and the friction therein involved? Second, the scheme tends to paralyze one of the most vital move-

ments now operating for the improvement of existing general education. The old time general, academic education is beginning to be vitalized by the introduction of manual, industrial and social activities; it is beginning to recognize its responsibility to train all the youth for useful citizenship, including a calling in which each may render useful service to society and make an honest and decent living. Everywhere the existing school system is beginning to be alive to the need of supplementary agencies to help it fulfill this purpose, and is taking tentative but positive and continuous steps toward it. The City of Chicago in this same State of Illinois probably ranks behind no other city of the country in the extent and wisdom of the steps already taken, steps which will of necessity be followed by others just as fast as those already taken demonstrate their efficiency.

These two movements within the established American public school system, the proposed scheme, if adopted, will surely arrest. General education will be left with all its academic vices and its remoteness from the urgent realities of contemporary life untouched, and with the chief forces working for reform removed. Increasing recognition of its public and social responsibilities will be blasted. It is inconceivable that those who have loved and served our American common school system will, whatever the defects of this system, stand idly by and see such a blow aimed at it. Were anything needed to increase the force of the blow, it is the fact that the bill provides that all funds for industrial education raised by the local community be duplicated by the state, although the funds contributed by the state for general school purposes are hardly more than five per cent of the amount raised by local taxation.

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Thirdly, the segregation will work disastrously for the true interests of the pupils who attend the so-called vocation schools. Ex-Superintendent Cooley of Chicago, who is understood to be responsible for the proposed bill in its present form, has written a valuable report on "Vocational Education in Europe." He quite rightly holds in high esteem the work and opinions of Superintendent Kerschensteiner of Munich. It is noteworthy that this leading European authority insists upon all technical and trade work being taught in its general scientific and social bearings. Although working in a country definitely based on class distinctions (and where naturally the schools are based on class lines), the one thing Superintendent Kerschensteiner has stood for has been that industrial training shall be primarily not for the sake of industries, but for the sake of citizenship, and that it be conducted therefore on a purely educational basis and not in behalf of interested manufacturers. Mr. Cooley's own report summarizes Mr. Kerschensteiner's views as follows: "If the boy is to become an efficient workman he must comprehend his *work in all of its relations to science, to art, and to society in general.* . . . The young workman who understands his trade in *its scientific relations, its historical, economic and social bearings,* will take a higher view of his trade, of his powers and duties as a citizen, and as a member of society."

Whatever may be the views of manufacturers anxious to secure the aid of the state in providing them with a somewhat better grade of laborers for them to exploit, the quotations state the point of view which is self-evident to those who approach the matter of industrial education from the side of education, and of a progressive society. It is truly extraordinary that just at a time when even partisan politics are taking

a definitely progressive turn, such a reactionary measure as the institution of trade and commercial schools under separate auspices should be proposed. It is not necessary to argue concerning the personal motives of the bankers and manufacturers who have been drawn into the support of the measure. Doubtless many of them have the most public spirited of intentions. But no one experienced in education can doubt what would be the actual effect of a system of schools conducted wholly separate from the regular public schools, with a totally different curriculum, and with teachers and pupils responsible to a totally independent and separate school administration. Whatever were the original motives and intentions, such schools would not and could not give their pupil a knowledge of industry or any particular occupation in relation to "science, art and society in general." To attempt this would involve duplicating existing schools, in addition to providing proper industrial training. And it is self-evident that the economical and effective way to accomplish this move is to expand and supplement the present school system. Not being able to effect this complete duplication, these new schools would simply aim at increased efficiency in certain narrow lines. Those who believe in the continued separate existence of what they are pleased to call the "lower classes" or the "laboring classes" would naturally rejoice to have schools in which these "classes" would be segregated. And some employers of labor would doubtless rejoice to have schools supported by public taxation supply them with additional food for their mills. All others should be united against every proposition, in whatever form advanced, to separate training of employees from training for citizenship, training of intelligence and character from train-

ing for narrow industrial efficiency. That the evil forces at work are not local is seen in the attempt to get the recent national convention on industrial education in Philadelphia to commit itself in favor of the Illinois scheme.

APPENDIX IV

MONTHLY REPORT OF SCHOOL VISITOR

Public School No. 4, The Bronx

April, 1914

I. Number of new cases received in April	65
Number of unvisited cases left over from previous month	15
Total number of new cases	80
Number of active cases, old, during month	15
Total number of cases for April	95
Total number of families visited	65
Number of families visited twice	4
Number of families visited three times	3
Number of families visited four times	1
Total number of visits made	78
Number of cases dropped (removals from district)	4
II. Classification by causes:	
a. Poor attendance	27
b. Poor scholarship (reason not apparent)	10
c. Unsatisfactory conduct at school or in streets	4
d. Evidence in classroom of poor home conditions	1
e. Repeated lateness	1

f. Poor health conditions

Eyes	3	
Adenoids	1	
Paralysis	1	
Teeth	2	
General health	2	9

g. Special cases 3

h. Number of visits made to mothers in connection with preventive work (Monday night club) 10

Total 65

III. Constructive or preventive agencies (referred to or evidence of):

Mothers' Club of P. S. No. 4	3
New York Child Labor Committee	2
Board of Health	3
Grace Church Chapel	2
Bronx House Clubs	2
Society for the Prevention of Cruelty to Children	1
Bronx Hospital Dispensary	1
United Hebrew Charities of The Bronx	2

Bronx House Club Leaders' Organization

Association of Neighborhood Workers

Tenement House Department

Owners of tenement houses

Owners of moving picture theaters.

IV. Comments:

1. The dulling effect of the home drudgery of the foreign mother was mentioned in our report of last month. Time and again we have come across mothers who might be willing to help in school problems affecting their children, but who seemed

to be dulled for the lack of recreation and therefore unable to help us. In an attempt to meet this situation a mothers' club was organized to meet at the Model Flat on Monday nights.

2. The frequent absence from school of 1 A children appeared as a problem this month. We have had more cases of absence from this group than from any other. No doubt, the inclement weather has a good deal to do with it, but after visiting the parents it would appear that a great many parents esteem too lightly the value of proper school attendance for the first term of their children's life at school. This situation is probably of more than local interest.

   Recommended: That this question be taken up at the next meeting of the Parents' Association or the Mothers' Club; also that similar coöperation be invited from city organizations such as the Child Welfare League.

   Recommended: That a leaflet be prepared and given to parents when they first bring their child to school. In this leaflet the importance of starting the child in the right way should be pointed out.

3. Especial attention was paid by visitor to the condition of the tenements as she found them on her visits. Conditions are particularly bad on Third Avenue where the houses are old, the halls dark, and the rooms dark and made noisy by the elevated trains. The Tenement House Department, Board of Health, and tenement house owners were communicated with, to the end that better lights

were placed in the halls, refuse was removed from halls, and the halls put into better condition.

4. Three moving picture theaters were found to be admitting children without guardian and under sixteen in defiance of the law. They were warned. Also certain candy stores in the neighborhood used as hangouts for children during school hours were warned. This will be followed up in the case of the theaters.

V. Three typical cases:

Case 89: Case of continued truancy. Yetta is a girl of fifteen. Upon investigation it was found that Yetta's mother died a year ago in Russia. Yetta's married sister, who lives in this city, sent for her with the intention of giving her a good education and taking good care of her. The sister's husband, a car conductor, pretty soon discovered that his earnings were not sufficient to enable him to keep Yetta at school, and he wanted Yetta to go to work. Yetta was not ready for her employment certificate. Consequently they kept her at home to enable her married sister to go to work. They explained to the school authorities that Yetta must begin to earn or they would have her deported.

The case was immediately referred to the U. H. C. Yetta was placed in a special class and we expect her to be ready for her working papers by June. Her sister, after consultation, saw things in a reasonable light and she was persuaded to coöperate.

Case No. 105: Two children of the same family were reported by their teachers as deficient in their work,

due to physical and home conditions. An examination showed malnutrition. The home was visited. We found the mother was an U. H. C. pensioner, receiving three dollars a week for food, a bottle of milk a day, coal in cold weather and her rent, apparently a very reasonable allowance. We found, however, that she was buying her food at the delicatessen store instead of cooking it herself. This was not only not healthful but decidedly more expensive. A committee of the Mothers' Club visited her repeatedly and tried to persuade her to do her own cooking. In coöperation with our school nurse we showed her how to manage her allowance reasonably well by judicious use, but she absolutely refused to cook. The children showed the results of her neglect. After a conference with the U. H. C. representatives they suggested that they would be willing to increase the allowance, providing the mother would report every Monday night at the Housekeeping Centre of the Bronx House to be instructed in ways to cook inexpensive foods, such as farina, potatoes, beans, soups, etc., and then to cook them at home. The mother has agreed and we are watching the new arrangement with interest.

Case No. 90 came from a Brooklyn school with a DD record (the lowest rating in conduct and work). The clerk as usual in such cases sent his name to the Committee on Children's Interests, which followed him up and tried to keep him out of trouble. After three weeks in the school he suddenly burst out one morning in a spell of

impudence and shrieking disorder. The mother, who had been used to her son's troubles at school, was antagonistic, and the case had all the earmarks of a hardened discipline case with very discouraging home surroundings. The boy was put back to a lower grade; and the case was put in the hands of the school visitor. After friendly relations were established between the school visitor and the boy, a compact was formed between them. He promised to make the effort of his life, and now after almost a month he has been placed in his proper class again and is living up to the terms of the compact faithfully.

VI. Conferences:

Visitor had conferences during the month at the Public Education Association, Bronx House and with the Mothers' Club of P. S. 4.

A conference was held at the Bronx office of the United Hebrew Charities, Mr. Henry J. Eckstein, presiding. Mr. Eckstein is also a member of the Board of Directors of Bronx House. Representing the school were Mr. Hirsdansky (also on the Board of Directors of Bronx House), Miss Lambert and Miss Bildersee, Assistants to Principal, Miss Feitzinger, school nurse, and Miss Manheim, visiting teacher. Such cases as the school authorities knew to be U. H. C. cases were gone over in detail and the method of treatment discussed. A detailed report of the conference is hardly called for here, excepting that it shows the way for coöperation with other agencies. We wish to point out

that to our knowledge the U. H. C. has hereby shown a view of coöperation which has, so far as we know, never been shown by any similar organization in the city.

Respectfully submitted,

VIOLA MANHEIM,
Visiting Teacher.

SIMON HIRSDANSKY,
Principal.

APPENDIX V

THE MURRAY HILL PRE-VOCATIONAL PUBLIC SCHOOL FOR BOYS, NEW YORK

PURPOSE

The school is intended for young boys who wish to pursue a practical course of study to fit them for positions in the trades. The pupil will be given an opportunity to discover what branch of trade work he is best fitted to undertake. He will be permitted to select four different trades, from four distinct groups, occupying himself for about ten weeks with the practice of each trade. The results of his work in these trade subjects will be compared, and he will be required to pursue the one in which he has shown greatest proficiency. Should he show exceptional proficiency in the first trade chosen, he will be permitted to confine his work to that trade.

TRADE GROUPS

I	II	III	IV	V
Woodwork	*Metal Work*	*Electrical Work*	*Draughting*	*Advertising*
1. Joinery.	Plumbing and Gas Fitting.	1. Electric Wiring and Installation.	1. Mechanical Drawing. *a*) Freeh'd Sketching (working drawings). *b*) Finished Working Drawings. *c*) Elementary Perspective.	1. Sign Painting.
2. Cabinet Making and Finishing.		2. Instrument Making.	2. Architectural Drawing.	2. Display and Show Cards.
3. House-Carpentry.		3. Electric Signs.	3. Making and Reading Blue Prints.	
		4. Electroplating.		

NOTE: Courses in Machine Shop Practice, Printing, Bookbinding, etc., will be offered as soon as the equipment has been installed.

APPENDIX VI

SIXTY-THIRD CONGRESS, SECOND SESSION

H. R. 7951

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 12, 1914

Ordered to be printed with the amendments of the Senate.

An Act

To provide for coöperative agricultural extension work between the agricultural colleges in the several States receiving the benefits of an Act of Congress approved July second, eighteen hundred and sixty-two, and of Acts supplementary thereto, and the United States Department of Agriculture.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

That in order to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same, there may be inaugurated in connection with the college or colleges in each State now receiving, or which may hereafter receive, the benefits of the Act of Congress approved July second, eighteen hundred and sixty-two, entitled "An Act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts" (Twelfth Statutes at Large, page five hundred and three), and of the Act of Congress approved August thirtieth, eighteen hundred and ninety (Twenty-sixth Statutes at Large, page four hundred and seventeen and chapter eight hundred and forty-one), agricultural extension work which shall be carried on in coöperation with the United States Department of Agriculture: Provided, That in any State in which two or more such colleges have been or hereafter may be established the appropriations hereinafter made to such State shall be administered by such college or colleges as the governor of such State and the Secretary of Agriculture may jointly from time to time direct: Provided further, That, pending the inauguration and development of the cooperative extension work herein authorized, nothing in this Act shall be construed to discontinue either the farm management work or the farmers' coöperative demonstration work as now conducted by the Bureau of Plant Industry of the Department of Agriculture.

SEC. 2. That coöperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not

attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on without discrimination as to race in such manner as may be mutually agreed upon by the Secretary of Agriculture and the State agricultural college or colleges receiving the benefits of this Act.

SEC. 3. That for the purpose of paying the expenses of said coöperative agricultural extension work and the necessary printing and distributing of information in connection with the same, there is permanently appropriated, out of any money in the Treasury not otherwise appropriated, the sum of $490,000 for each year, $10,000 of which shall be paid annually, in the manner hereinafter provided, to each State which shall by action of its legislature assent to the provisions of this Act: Provided, That payment of such installments of the appropriation hereinbefore made as shall become due to any State before the adjournment of the regular session of the legislature meeting next after the passage of this Act may, in the absence of prior legislative assent, be made upon the assent of the governor thereof, duly certified to the Secretary of the Treasury: Provided further, That there is also appropriated an additional sum of $600,000 for the fiscal year following that in which the foregoing appropriation first becomes available, and for each year thereafter for seven years a sum exceeding by $600,000 the sum appropriated for each preceding year, and for each year thereafter there is permanently appropriated for each year the sum of $4,800,000 in addition to the sum of $490,000 hereinbefore provided: Provided further, That before the funds herein

appropriated shall become available to any college for any fiscal year plans for the work to be carried on under this Act shall be submitted by the proper officials of each college and approved by the Secretary of Agriculture. Such additional sums shall be used only for the purposes hereinbefore stated, and shall be allotted annually to each State by the Secretary of Agriculture and paid in the manner hereinbefore provided, in the proportion which the rural population of each State bears to the total rural population of all the States as determined by the next preceding Federal census: Provided further, That no payment out of the additional appropriations herein provided shall be made in any year to any State until an equal sum has been appropriated for that year by the legislature of such State, or provided by State, county, college, local authority, or individual contributions, for the maintenance of the coöperative agricultural extension work provided for in this Act.

SEC. 4. That the sums hereby appropriated for extension work shall be paid in equal semiannual payments on the first day of January and July of each year by the Secretary of the Treasury upon the warrant of the Secretary of Agriculture, out of the Treasury of the United States, to the treasurer or other officer of the State duly authorized by the laws of the State to receive the same; and such officer shall be required to report to the Secretary of Agriculture, on or before the first day of September of each year, a detailed statement of the amount so received during the previous fiscal year, and of its disbursement, on forms prescribed by the Secretary of Agriculture.

SEC. 5. That if any portion of the moneys received by the designated officer of any State for the support and

maintenance of coöperative agricultural extension work, as provided in this Act, shall by any action or contingency be diminished or lost, or be misapplied, it shall be replaced by said State to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to said State, and no portion of said moneys shall be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building or buildings, or the purchase or rental of land, or in college-course teaching, lectures in colleges, promoting agricultural trains, or any other purpose not specified in this Act, and not more than five per centum of each annual appropriation shall be applied to the printing and distribution of publications. It shall be the duty of each of said colleges annually, on or before the first day of January, to make to the governor of the State in which it is located a full and detailed report of its operations in the direction of extension work as defined in this Act, including a detailed statement of receipts and expenditures from all sources for this purpose, a copy of which report shall be sent to the Secretary of Agriculture and to the Secretary of the Treasury of the United States.

Sec. 6. That on or before the first day of July in each year after the passage of this Act the Secretary of Agriculture shall ascertain and certify to the Secretary of the Treasury as to each State whether it is entitled to receive its share of the annual appropriation for coöperative agricultural extension work under this Act, and the amount which it is entitled to receive. If the Secretary of Agriculture shall withhold a certificate from any State of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in

the Treasury until the expiration of the Congress next succeeding a session of the legislature of any State from which a certificate has been withheld, in order that the State may, if it should so desire, appeal to Congress from the determination of the Secretary of Agriculture. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury.

SEC. 7. That the Secretary of Agriculture shall make an annual report to Congress of the receipts, expenditures, and results of the coöperative agricultural extension work in all of the States receiving the benefits of this Act, and also whether the appropriation of any State has been withheld; and if so, the reasons therefor.

SEC. 8. That the word "State" wherever the same occurs herein shall be held to apply to and include any organized Territory of the United States which is now included under or is now receiving the benefit of the Act of Congress approved July second, eighteen hundred and sixty-two, entitled "An Act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts" (Twelfth Statutes at Large, page five hundred and three), and of the Act of Congress approved August thirtieth, eighteen hundred and ninety, being chapter eight hundred and forty-one (Twenty-sixth Statutes at Large, page four hundred and seventeen).

SEC. 9. That Congress may at any time alter, amend, or repeal any or all of the provisions of this Act.

Passed the House of Representatives January 19, 1914.

Attest: SOUTH TRIMBLE, *Clerk.*

Passed the Senate February 7, 1914, with amendments.

Attest: JAMES M. BAKER, *Secretary.*

APPENDIX VII

THE WISCONSIN APPRENTICE LAW OF 1911 [1]

SECTION 2377. Every contract or agreement entered into between a minor and employer by which the minor is to learn a trade shall be known as an indenture, and shall comply with the provisions of sections 2378 to 2386, inclusive, of the statutes. Every minor entering into such a contract shall be known as an apprentice.

SEC. 2378. Any minor may, by the execution of an indenture, bind himself as hereinafter provided, and such indenture may provide that the length of the term of the apprentice shall depend on the degree of the efficiency reached in the work assigned, but no indenture shall be made for less than one year, and if the minor is less than eighteen years of age the indenture shall in no case be for a period of less than two years.

SEC. 2379. Any person or persons apprenticing a minor or forming any contractual relation in the nature of an apprenticeship without complying with the provisions of sections 2377 to 2387, inclusive, of the statutes, shall, upon conviction thereof, be punished by a fine of not less than fifty nor more than one hundred dollars.

SEC. 2380. It shall be the duty of the commissioner of labor, the factory inspector, or assistant factory inspectors to enforce the provisions of this act and to prosecute viola-

[1] Laws of Wisconsin relating to employment of women and children, industrial education and truancy. Wisconsin State Bd. of Indus. Educ., *Bulletin No. 1*, pp. 24–26.

tions of the same before any court of competent jurisdiction in this State.

SEC. 2381. Every indenture shall be signed:

(1) By the minor.

(2) By the father; and if the father be dead or legally incapable of giving consent, or has abandoned his family, then

(3) By the mother; and if both the father and the mother be dead or legally incapable of giving consent, then

(4) By the guardian of the minor, if any.

(5) If there be no parent or guardian with authority to sign, then by two justices of the peace of the county of residence of the minor.

(6) By the employer.

SEC. 2382. Every indenture shall contain:

(1) The names of the parties.

(2) The date of the birth of the minor.

(3) A statement of the trade the minor is to be taught, and the time at which the apprenticeship shall begin and end.

(4) An agreement stating the number of hours to be spent in work, and the number of hours to be spent in instruction. The total of such number of hours shall not exceed fifty-five in any one week.

(5) An agreement that the whole trade, as carried on by the employer, shall be taught, and an agreement as to the time to be spent at each process or machine.

(6) An agreement between the employer and the apprentice that not less than five hours per week of the aforementioned fifty-five hours per week shall be devoted to instruction. Such instruction shall include —

(*a*) Two hours a week instruction in English, in citizenship,

business practice, physiology, hygiene, and the use of safety devices.

(*b*) Such other branches as may be approved by the State board of industrial education.

(7) A statement of the compensation to be paid the apprentice.

SEC. 2383. The instruction specified in section 2382 may be given in a public school, or in such other manner as may be approved by the local board of industrial education; and if there be no local board, subject to the approval of the State board of industrial education. Attendance at the public school, if any, shall be certified to by the teachers in charge of the courses, and failure to attend shall subject the apprentice to the penalty of a loss of compensation for three hours for every hour he shall be absent without good cause. It shall be the duty of the school officials to coöperate for the enforcement of this law.

SEC. 2384. It shall be lawful to include in the indenture or agreement an article stipulating that during such period of the year as the public schools shall not be in session the employer and the apprentice may be released from those portions of the indenture which affect the instruction to be given.

SEC. 2385. If either party to an indenture shall fail to perform any of the stipulations, he shall forfeit not less than ten nor more than fifty dollars on complaint, the collection of which may be made by the commissioner of labor, factory inspector, or assistant factory inspectors in any court of competent jurisdiction in this State. Any court of competent jurisdiction may, in its discretion, also annul the indenture. Nothing herein prescribed shall deprive the employer of the right to dismiss any apprentice who has will-

fully violated the rules and regulations applying to all workmen.

SEC. 2386. The employer shall give a bonus of not less than fifty dollars to the apprentice on the expiration of the term of the indenture, and also a certificate stating the term of the indenture.

SEC. 2387. A certified copy of every indenture by which any minor may be apprenticed shall be filed by the employer with the State commissioner of labor.

This apprentice law, the most advanced in the United States, is in several respects very like the German national law, described in chapter 7. It is to be studied in connection with the Wisconsin compulsory improvement school attendance law of 1911, which is here given:

Continuation and Evening Schools[1]

(SECTION 1728c–1) 1. Whenever any evening school, continuation classes, industrial school, or commercial school shall be established in any town, village, or city in this State for minors between the ages of fourteen and sixteen working under permit as now provided by law, every such child residing within any town, village, or city in which any such school is established shall attend such school not less than five hours per week for six months in each year until such child becomes sixteen years of age, and every employer shall allow all minor employees over fourteen and under sixteen years of age a reduction in hours of work of not less than the number of hours the minor . . . is by this section required to attend school.

[1] Laws of Wisconsin relating to employment of women and children industrial education and truancy. Wisconsin State Bd. of Indus. Educ., *Bulletin No. 1*, p. 10.

APPENDIX VIII

A GERMAN APPRENTICE CONTRACT[1]

The following apprentice contract is executed between the firm of Friedrich Krupp, share company in Essen on the Ruhr, and (apprentice's name), born at (place of birth), to (name of parents), accompanied by his (parent or guardian, and name), as his legal representative.

SECTION 1. The firm accepts (apprentice's name) as apprentice for their cast-steel factory and obligates themselves to have him trained as a (trade or branch in which apprenticed) under the direction of a suitable representative. The apprentice is thrown under the fatherly authority of the representative.

SEC. 2. The apprentice is obligated to obedience and truth, to industry and proper conduct.

He must regularly attend, under the direction of the firm, an improvement school, and present the certificate there obtained, immediately on its receipt, to the official set over him.

SEC. 3. The apprentice is responsible for his support and for all other things necessary, with the exception of the tools necessary to his work.

He shall receive from the day of his entrance on apprenticeship pay for each working day, which shall depend on his conduct, ability, and efficiency, according to the following scheme:

[1] *Bulletin No. 19*, 1913, U. S. Commissioner of Education.

Daily Pay of Apprentices

Age of Entrance	Year of Apprenticeship		
	First	Second	Third
	Marks	*Marks*	*Marks*
Between 14 and 15 years	0.50–0.70	0.80–1.00	1.10–1.50
Between 15 and 16 years	.70– .90	1.00–1.20	1.40–1.80

Qualified apprentices may be allowed to undertake piecework in their third year, and for this receive up to 50 pfennigs a day in excess of their daily wage.

No subtraction from the wage of the apprentice shall be made for the working hours in which he attends improvement school.

Sec. 4. The apprenticeship begins with the (date) and lasts three years. Work days in which the apprentice has neglected (his work) shall not be included in the reckoning of the length of apprenticeship, but so much more must be added. With good conduct and efficiency, the repetition of neglected days to a maximum of 25 may be remitted.

Sec. 5. The first three months of the apprenticeship are a period of probation, during which either party may withdraw from the apprentice contract.

After the probation period the firm is authorized to discharge the apprentice at once before the ending of the contractual time in the cases stated in section 123 of the National Industrial Law (see supplement), or when he has repeatedly violated his duties of obedience and truth, industry and proper conduct, or neglected his attendance on improvement or trade school. (Sec. 2.)

SEC. 6. On the part of the apprentice, the apprenticeship may be ended in the cases of section 124, numbers 1, 3, 4, and 5 of the National Industrial Law (see supplement), and also if the firm neglects their legal duties toward the apprentice in a manner dangerous to his health, his morals, or his training, or misuses the right of fatherly authority, or becomes unable to fulfill their contractual duties.

SEC. 7. On the close of the apprenticeship a certificate shall be given to the apprentice concerning the length of the apprenticeship and the knowledge and skill acquired during it, as well as concerning his conduct. An apprentice letter (Lehrbrief) shall be given only when the contractual period of apprenticeship has been completed or shortened with approval of the firm.

SEC. 8. The firm reserves to itself the payment to the apprentice on regular completion of apprenticeship, when his conduct and efficiency was, according to the decision of the official in charge, good, of a reward not to exceed 150 marks.

The firm decides according to its free judgment whether the payment is to be refused wholly or in part, and whether it is to be made to the apprentice himself or to his legal representative.

SEC. 9. Subject to the provisions of this contract, the apprentice is subject to all regulations for the workers of the cast-steel factory, especially the work regulations.

For other matters, so far as there are no regulations in the present contract, the provisions of the National Industrial Law apply.

SEC. 10. Apprentices who remain at the steel factory after the close of their apprenticeship shall, on continued good

conduct and efficiency, so far as possible, be given opportunity to train themselves further and to progress.

Essen / Ruhr, the (date)

(Signature of the apprentice.)

(Signature of the legal representative.)

Fried. Krupp
Aktiengesellschaft.
Das Direktorium.

The above apprentice contract is that used in the great Krupp works, employing 30,000 men, besides officials. The normal contract forms of the chambers of industry for handwork in Prussia are very long and provide for almost all questions that might arise under the apprenticeship. Their main provisions are presented in the exposition of the National Industrial Law, in chapter 7. Different forms of contracts are sometimes used for handworkers and for factory workers.

APPENDIX IX

WANTED: A JOB — "ANYTHING AT ALL"

BY CLEMENCE FEIGENBAUM

TERMINAL EMPLOYMENT AGENCY

Brooklyn, New York

One after another they come in, old and young, strong and weak, all on the same quest, the all-important job. What can they do? Nothing, most of them. But a job they must have, and a job they demand.

With the old it is already too late. No one wants them, no one can use them. The unskilled person has nothing to market but brute strength. When that is gone, he has lost all the economic value he ever had.

But what to do with the young? That is the great problem. They know nothing, they wish to know nothing. They drift along from job to job, from worse to better, and back again to worse. A fifty-cent piece looks bigger than the prospect of learning a trade. Just to-day I had a call from a large meter works for a boy. He was to get $6.50 as a beginner. It was not much, of course, but the boy would be taught a good trade, the mechanics' and pipe-fitters'. At either of these trades he would in time be in a position to command a higher wage than his unskilled father had ever thought of. But not a boy would take the place. Boys living at home and whose earnings are only spending money laughed at it. They wanted nine or ten dollars, not caring about a trade.

In the Spirit of Youth and the City Streets Jane Addams sums up the situation far better than I could. But as manager of an employment agency in one of the largest factory centers of the world, I have been struck by the facts as never before. Hundreds of people come into my office every week, yet for the great majority of them I have no position. They are unskilled. The call is for skilled people, those who know some one thing. These are always in demand. They receive fairly good wages. But the unskilled — they are a drug on the market. As the foreman in one of the factories here remarked, they know nothing and they want to be paid for it.

Here are a few examples of places open to the unskilled.

I am taking these out of my order book just as they came to me over the telephone. Of course, I do not give the names of the firms who sent in these calls, but they are all actual positions that I filled without any trouble at all. I can fill a call for a laborer in about twenty minutes, provided it comes in the morning. If it comes later I can fill it in perhaps an hour, or at the most, two.

Two laborers, strong, ten-hour day, $1 to $1.50 a day.

Laborer, nine-hour day, $8 a week.

Elderly man to do porter work, nine-hour day, $10 a week.

Boys about eighteen (3), eight-hour day, $7 a week.

Strong boy (18 or 19), eight-and-a-half-hour day, $5 a week.

Colored boy for porter work, ten-hour day, must have excellent references, $6 a week.

Strong boy (16) eight-hour day, $5 a week.

Seven girls, nine hours, must be over 16, $4.50 a week.

Laborer about 28, German preferred, strong, $9 a week.

All these are typical. I have quoted only one order for girls, but I receive many such, every week.

Here, then, is our problem. Those for whom it is too late to learn must somehow or other be supported. But that is the smallest part of the problem. We must train the younger ones, teach them something at which they can make a respectable living, and the spirit of youth prohibits. Frankly I can see nothing to be done until the employers are ready to coöperate to the extent of having their younger employees go to continuation schools. An intelligent system of welfare work, and above all, shorter hours, would do wonders.

The Survey, 1914.

APPENDIX X

VOCATIONAL SCHOOL FOR BOYS (PUBLIC), NEW YORK

EXTRACTS FROM THE ANNUAL REPORT[1] OF THE PRINCIPAL, DR. CHARLES J. PICKETT

Statistics

The average daily attendance for September, 1912, was 334; for July, 1913, it was 444. The average for the year was 427. During the year, 892 different pupils received instruction.

In February, there were 28 graduates from the two-year course; in July, there were 48; a total of 76, distributed as follows:

Architectural and Mechanical Drawing	17
Commercial Design	1
Electric Wiring and Installation	35
Machine Shop and Forge Practice	13
Pattern Making	3
Plumbing	1
Printing	2
Woodworking	4
Total	76

Carpentry Department

No. of graduates from July, 1911, to February, 1913	9
No. of graduates located and reported on	9
No. of graduates employed in trade work	7
No. of graduates employed in clerical work	1
No. of graduates employed in unskilled work	1
Average present wage of class of July, 1911	No graduates
Average present wage of class of February, 1912	$11.25
Average present wage of class of July, 1912	$8.50
Average present wage of class of February, 1913	$6.00
Average wage of 37 non-graduates of this department	$4.74

[1] School year, 1912–1913.

Electric Wiring Department

No. of graduates from February, 1912, to February, 1913	36
No. of graduates located and reported on	36
No. of these employed at trade work	30
No. of these employed at clerical work	5
No. of these employed as a musician	1
No. of these employed in unskilled work	0
Present average wage of class of February, 1912	$12.94
Present average wage of class of July, 1912	$10.00
Present average wage of class of February, 1913	$8.40

NOTES: Views of several of the classes are shown in the illustrations.

APPENDIX XI

NEW YORK EVENING SCHOOL OF INDUSTRIAL ART (PUBLIC)

EDWARD C. ZABRISKIE, PRINCIPAL

PURPOSE

The purpose of this school is to provide free instruction in drawing and design as applied to art industries. It appeals to art students with decorative work in view, and to workers already engaged in industries where a knowledge of the principles of drawing, color, and design will tend to increase the skill of the craftsman and enable him to advance in his vocation.

COURSES OF INSTRUCTION

1. Book Illustration.
2. Costume Design.
3. Elementary Drawing from Cast.

4. Advanced Drawing from Cast and Model.
5. Interior Decoration.
6. Jewelry Design.
7. Modeling and Sculpture.
8. Mural Decoration.
9. Poster and Advertising Design.
10. Stained Glass Design.
11. Textile Design.

NOTES: Views of several of the classes are shown in the illustrations.

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